

Section I – Occupations in Washington State

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How to Use the Occupation Summaries

Occupational Description

contains the occupational titles and a brief description of major duties for each occupation. Duties vary considerably, depending on the employer and on the employee's training and experience.

Employment Outlook in Washington & Approximate Pay

is stated in general terms.

- Faster than average
- Average
- Slower than average
- No growth
- Declining

Percentage of growth reflects anticipated growth for each occupation. This information comes from the Washington Occupational Information System and is based on projections provided by the Washington State Employment Security Department. The projections reflect the demand by private industry and government for workers, as well as self-employed individuals and unpaid family workers. The information does not include openings created by workers changing from one job to another.

Wage figures represent the average pay range (entry level to experienced), excluding benefits for full-time wage and salary workers. Wage rates may vary substantially with the number of years of experience.

Source: Washington Occupational Information System (WOIS).

Suggested Education/ Training

lists the training program that is either required or recommended for entry into the occupation or for advancement.

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Aircraft Mechanics service aircraft by locating problems and performing needed changes and repairs.	WOIS-3116 DOT-621. 281-014 OES-*	Declining 2% decline 2000–2008 106 openings/year \$1,165–\$4,330/month	HS, CC, TC, APP, LIC	Aircraft Mechanics	CC: 2, 7, 21, 22 TC: 31 PCS: 108, 257

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Agriculture & Natural Resources

Instructional programs and occupations dealing with growing plants and harvesting crops for commercial and scientific purposes; raising and training animals; the health of plants and animals; the use of natural resources; and the management of agricultural businesses and production of agricultural goods.

- Agriculture Sciences, Processes & Support Services
- Conservation & Natural Resources
- Agriculture Management, Production & Operations
- Horticulture, Landscaping, & Groundskeeping

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Agricultural Scientists work with farm crops and animals and ways to protect, develop, and manage them.	WOIS-2641 DOT-040.061-010 OES-24305	Average 14% growth 2000–2008 9 openings/year \$1,500–\$5,711/month	COL, GRAD	Agricultural Science	U: 47–50
Animal Caretakers are responsible for the welfare of animals in zoos, kennels, stables, animal shelters, aquariums, and laboratories.	WOIS-8672 DOT-410.674-010 OES-79017	Average 11% growth 2000–2008 138 openings/year \$1,165–\$2,730/month	HS, OJT, CC, TC	Animal Technician	CC: 16–17 TC: 30, 32 PCS:
Commercial Fishers use nets, hooks, and other devices to catch a variety of ocean fish and marine life. Principal summer catches in Washington are salmon and bottom fish. Crab and bottom fish make up the main winter catch. Aquaculturists culture, breed, raise, and harvest aquatic life such as fish and clams.	WOIS-4328 DOT-441.684-010 OES-77005 OES-79442	Slower than average 5% growth 2000–2008 186 openings/year \$0–\$50,000/year	OJT, VOC, CC, TC, LIC	Aquaculture, Commercial Fishing, Fisheries Technology, Marine Maintenance Technology	CC: 9, 15, 21 TC: 32 The Alaska fisheries are also sources of employment for Washington residents.
Farm & Ranch Hands plant, tend, harvest, market crops, and/or raise animals such as poultry, hogs, sheep, and cattle to produce food. They also operate, repair, and maintain farm machinery and equipment, as well as clean and repair farm buildings, fences, and other structures.	WOIS-4166 DOT-421.683-010 OES-*	Declining 1% decline 2000–2008 1,482 openings/year \$1,165–\$2,000/month	OJT, HS, CC	Agricultural Production, Agricultural Mechanics	CC: 6, 21, 27–28, 30

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Farm Equipment Mechanics maintain, repair, and overhaul farm equipment used to plant, cultivate, and harvest crops. Many become specialists in certain types of equipment, especially on large farms or in dealership repair shops.	WOIS-3115 DOT-624.281-010 OES-85321	No growth 47 openings/year \$1,210–\$2,900/month	OJT, HS, CC, TC, APP	Agricultural Mechanics, Heavy Equipment Technology	CC: 4–6, 9, 12, 21, 24 TC: 31–32, 34 PCS:
Farmers & Ranchers perform varied jobs for efficient and profitable farm operation. They plant, harvest, and market crops; raise, tend, and market farm animals, fish, or marine plants; and supervise workers. Since farms are growing in size and mechanization, farming often requires large capital outlays, numerous skills, and a lot of personal time and energy.	WOIS-4164 DOT-180.167-018 DOT-421.161-010	Not surveyed Earnings vary greatly	OJT, HS, CC, COL	Agriculture Production & Farm Management Technology, Aquaculture, Agribusiness	CC: 6, 21, 24, 27–28, 30 U: 47–50
Fish & Wildlife Specialists work with natural resources such as soil, water, plants, and animals to produce an environment that supports animal life. This area is very broad and includes enforcement, fish culture, water quality control, and fish and wildlife research and management.	WOIS-4126 DOT-379.167-010 OES-*	Declining 4% decline 2000–2008 \$988–\$3,145/month	COL, GRAD	Biological Sciences	U: 36–51 PU: 55–56, 58–59, 60–62, 46–67
Foresters manage and develop forest lands and resources for economic and recreational purposes. Foresters plan and supervise tree cutting and planting and may be responsible for environmental protection.	WOIS-4124 DOT-040.167-010 OES-24302	Average 7% growth 2000–2008 36 openings/year \$1,500–\$6,480/month	COL	Forest Resource Management, Forestry	U: 44–50 PU: 56
Forestry Technicians apply forestry techniques developed by professional foresters to care for and manage forest lands and resources for economic and recreational purposes.	WOIS-4128 DOT-452.364-010 OES-79002	Declining 4% decline 2000–2008 66 opening/year \$1,280–\$2,500/month	OJT, HS, CC	Forestry Technology	CC: 4, 9-10, 15, 23–24

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Groundskeepers & Gardeners maintain the grounds of industrial, commercial, public, or private property to keep them in neat and orderly condition.	WOIS-4144 DOT-406.684-014 DOT-406.684-018 OES-79033	Average 7% growth 2000–2008 736 openings/year \$1,165–\$3,090/month	OJT, HS, CC, TC, APP	Landscaping & Horticulture Technology, Turf Management	CC: 5, 7, 21–24, 27 TC: 33–34 PCS:
Hatchery Workers perform a variety of semiskilled, manual duties at fish hatcheries and assist in technical work.	WOIS-4127 DOT-446.684-010	Not surveyed \$1,640–\$2,260/month	OJT, CC, COL, TC	Aquaculture, Fisheries Technology	CC: 9, 15 TC: 32 U: 44–46
Irrigation Technicians assist in the control of applying water to agricultural crops through an open ditch, sprinkler, irrigation, or modified systems.	WOIS-4291 DOT-409.685-014 DOT-624.361-014	Not surveyed \$1,300–\$3,280/month	OJT, HS, VOC, CC	Irrigation Technology	CC: 27
Nursery Workers grow seedlings and plants for landscaping, fruit farming, and forest replanting.	WOIS-4142 DOT-405.684-014	Not surveyed \$1,165–\$2,420/month	OJT, VOC, CC, TC, LIC, APP	Horticulture or Nursery Management	CC: 5, 7, 23–24
Pest Control Workers use chemicals, toxic gases, and mechanical traps to rid residential and commercial areas of rodents, insects, birds, and other pests.	WOIS-3462 DOT-389.684-010 OES-67008	Average 17% growth 2000–2008 30 openings/year \$1,165–\$3,080/month	OJT, HS, LIC		No approved/ accredited training programs in Washington.
Seasonal Farm Laborers (also called Manual Laborers or Pickers) engage in physical farm work on a seasonal basis. Earnings are usually based on an hourly or piecework basis.	WOIS-4168 DOT-421.687-010 DOT-404.687-014 DOT-403.687-018	Not surveyed \$6.50–\$10.50/hour	OJT		
Soil Conservation Aides assist landowners and operators in planning and applying soil and water conservation practices.	WOIS-2645 DOT-040.261-010 DOT-040.061-054	Not surveyed \$1,820–\$2,310/month	HS, CC	Soil Conservation Courses, Natural Resources Management	CC: 4, 9, 21, 24 PU: 56
Wine Makers turn grape or other fruit juices into wine using a combination of natural, chemical, and mechanical processes.	WOIS-4349	Not surveyed \$1,250–\$5,410/month	OJT, COL, GRAD, LIC		U: 47–50
Yarding & Loading Occupations are responsible for moving logs from cutting areas to trucks.	WOIS-6156 DOT-921.663-058 DOT-921.683-066 OES-73011	Slower than average 1% growth 2000–2008 28 openings/year \$1,560–\$3,490/month	OJT, HS	No approved/ accredited training programs in Washington.	

Architecture & Construction

Instructional programs and occupations dealing with the design, planning, managing, building, and maintenance of physical structures such as roadways and bridges, as well as industrial, commercial, and residential facilities and buildings.

- Architecture & Construction Design
- Residential & Commercial Installation & Services
- Residential & Commercial Construction

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Architects plan and design in detail all types of buildings, including homes, office buildings, theaters, and factories. Designs must be attractive, safe, functional, and comply with laws and regulations.	WOIS-2464 DOT-001.061-010 OES-*	Average 16% growth 2000–2008 226 openings/year \$2,200–\$6,114/month	COL, GRAD, LIC	Architecture U: 44–50	
Bricklayers & Tile Setters use masonry materials and mortar to build and repair walls, fireplaces, chimneys, arches, and piers. Working from blueprints, they assemble brick, stone, terra cotta tile, glass and concrete block, and precast concrete panels.	WOIS-4264 DOT-861.381-018 DOT-861.381-038 DOT-861.381-054 OES-*	Average 10% growth 2000–2008 83 openings/year \$1,165–\$5,630/month	OJT, APP	Bricklaying, Masonry	Training is available through apprenticeship programs.
Building Contractors perform construction work in accordance with plans, blueprints, and codes under specified terms and prices.	WOIS-1153 DOT-182.167-010	Not surveyed	TC, CC, COL, LIC	Construction Technology	CC: 5, 14–15, 22 TC: 32-33, 35 U: 42
Building Inspectors examine building plans and construction projects to ensure that set standards of safe construction and quality workmanship are observed.	WOIS-2671 DOT-168.167-030 OES-21908	Average 13% growth 2000–2008 69 openings/year \$1,820–\$4,450/month	OJT, VOC, CC, TC, LIC	Construction Technology, Construction Management	CC: 5, 7, 14–15, 19, 22 TC: 32-33, 35 PCS:
Building Maintenance Workers keep an establishment's machines, mechanical equipment, and structure in repair. Duties may involve pipefitting, boilermaking, insulating, welding, machining, machine and equipment repairing, carpentry, and electrical work. They may do janitorial and grounds maintenance work in small establishments.	WOIS-3422 DOT-899.381-010 DOT-899.261-014 OES-85132	Average 16% growth 2000–2008 \$1,165–\$3,100/month	OJT, VOC, CC, TC, APP	Building Maintenance	CC: 5, 12, 22–24 TC: 31–35

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Carpenters build and maintain structures, ranging from rough scaffolds to finished work on buildings. They work from blueprints, sketches, or building plans according to building codes and may work with a wide range of materials. Carpenters may specialize in construction (new buildings and structures) or maintenance carpentry (old buildings and structures).	WOIS-4254 DOT-860.381-022 OES-*	Average 10% growth 2000–2008 1,513 openings/year \$1,125–\$3,990/month	OJT, VOC, CC, TC, APP	Carpentry, Construction Technology, Marine Maintenance Technology	CC: 6, 9–10, 15, 18 24, 27– 28 TC: 31, 33 PCS: Training is available through apprenticeship programs.
Cement Masons mix, pour, and finish concrete for many construction jobs, ranging from small ones, such as patios and floors, to large ones, such as dams and highways. Cement Masons supervise concrete pouring and finishing.	WOIS-4246 DOT-844.364-010 OES-87311	Average 8% growth 2000–2008 91 openings/year \$958–\$4,440/month	OJT, VOC, APP	Masonry	Training is available through apprenticeship programs.
Construction Laborers assist skilled workers in their jobs. They unload materials, machinery, and equipment; lift and carry materials and tools; mix or prepare materials; and prepare and clean the worksite.	WOIS-4286 DOT-869.664-014 DOT-862.684-014 OES-*	Average 8% growth 2000–2008 301 openings/year \$1,165–\$2,768/month	OJT, APP	Construction Methods & Materials, Construction Technology	Training is available through apprenticeship programs.
Construction Managers plan and direct construction projects to meet contractors' specifications and schedules. Projects include buildings, dams, bridges, highways, pipelines, and railroad structures.	WOIS-1152 DOT-182.167-026 OES-*	Average 11% growth 2000–2008 716 openings/year \$1,800–\$6,162/month	TC, CC, COL	Construction Management	CC: 7 TC: 33 U: 36–41, 44– 50 PCS:
Electricians plan, install, and repair electrical wiring and equipment. Electricians may specialize in either construction or maintenance work. Industrial electricians also inspect and service electronic control devices.	WOIS-5626 DOT-824.261-010 DOT-829.261-018 OES-87202	Average 7% growth 2000–2008 518 openings/year \$1,390–\$5,890/month	VOC, CC, TC, APP, LIC	Electrical & Electronics Technology, Construction Electrician	CC: 24 TC: 31–33 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Floor & Carpet Layers measure, mark, cut, and install carpets, rugs, or linoleum. Carpet installers do most of their work on their knees, often handle sharp razor blades, and do heavy lifting.	WOIS-4276 DOT-864.381-010 DOT-864.481-010 OES-*	Average 17% growth 2000–2008 196 openings/year \$1,480–\$5,550/month	OJT, APP		Training is available through apprenticeship programs.
Glaziers cut, fit, and install plate glass, window glass, and other glass in structures and vehicles. Glaziers use adhesives, cements, screws, bolts, and other special fasteners.	WOIS-4248 DOT-865.381-010 OES-*	Average 8% growth 2000–2008 56 openings/year \$1,165–\$5,580/month	OJT, HS, VOC, APP	Construction & Building Technology	Training is available through apprenticeship programs.
Heating-Cooling System Mechanics install, service, and repair refrigeration and heating units used in homes and public and commercial buildings.	WOIS-3146 DOT-637.261-014 OES-85902	Average 16% growth 2000–2008 250 openings/year \$1,210–\$3,830/month	OJT, HS, VOC, CC, TC, APP	Heating, Air Conditioning, & Refrigeration	CC: 12–13, 24, 27–28 TC: 31–33 PCS:
Heavy Equipment Operators (also called Operating Engineers) drive gasoline- or diesel-powered machinery equipped to level earth and clear land for road or building construction. They use machines that bore into the ground, spread and level asphalt and/or concrete on roads, and operate machines used to erect structural and reinforcement steel, as well as those used to demolish buildings.	WOIS-6151 DOT-859.683-010 OES-*	Average 12% growth 2000–2008 489 openings/year \$1,165–\$4,120/month	OJT, HS, APP	Heavy Equipment Operator	PCS: Training is available through apprenticeship programs.
Insulation Workers tape, wire, plaster, or spray insulation materials on an appropriate surface to ensure that either heat or cold will be retained.	WOIS-4292 DOT-863.640-010 DOT-863.364-014 OES-87802	Average 11% growth 2000–2008 81 openings/year \$1,220–\$3,600/month	OJT, HS, APP		PCS: Training is available through apprenticeship programs.
Ironworkers assemble and erect ornamental or structural metals used in the construction of buildings, bridges, dams, metal storage tanks, and other projects.	WOIS-5479 DOT-801.361-014 OES-*	Average 8% growth 2000–2008 61 openings/year \$2,260–\$5,370/month	APP		Training is available through apprenticeship programs.

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Linepersons install and repair electrical, cable television, telephone, and telegraph transmission systems for business and residential customers.	WOIS-5624 DOT-822.381-014 OES-*	Slower than average 5% growth 2000–2008 156 openings/year \$1,090–\$4,329/month	CC, TC, APP	Telephone Equipment Installation	CC: 5 TC: 33 Training is available through apprenticeship programs.
Painters & Paper Hangers apply coats of paint, varnish, stain, enamel, or lacquer to decorate and protect interior or exterior surfaces, trimmings, and fixtures of buildings and other structures.	WOIS-4242 DOT-840.381-010 DOT-841.381-010 OES-*	Average 14% growth 2000–2008 596 openings/year \$1,165–\$3,610/month	OJT, HS, VOC, TC, APP	Painting & Decorating	TC: 33 PCS: Training is available through apprenticeship programs.
Plasterers & Drywall Plasterers apply plaster to walls, ceilings, and partitions in buildings making them fire-resistant and soundproof. Drywall Installers attach drywall panels framework inside houses other buildings, which involves measuring, cutting, gluing, and hanging the panels.	WOIS-4244 DOT-842.361-018 DOT-842.361-030 OES-*	Average 8% growth 2000–2008 322 openings/year \$1,740–\$5,550/month	OJT, APP	Plastering & Drywall	Training is available through apprenticeship programs.
Plumbers & Pipefitters install and repair pipe systems that carry water, steam, air, or other liquids or gases. They also install plumbing fixtures, such as sinks, tubs, and showers.	WOIS-4274 DOT-862.381-030 OES-*	Slower than average 3% growth 2000–2008 289 openings/year \$1,720–\$5,830/month	HS, VOC, APP, LIC	Plumbing & Pipefitting	TC: 33 PCS: Training is available through apprenticeship programs.
Roofers apply materials, i.e., hot asphalt, composition roofing, wood shingles, asbestos shingles, slate or tile to roofs making them waterproof for new construction and repair	work. WOIS-4278 DOT-866.381-010 OES-*	Average 7% growth 2000–2008 209 openings/year \$1,234–\$3,580/month	OJT, APP	Roofing	Training is available through apprenticeship programs.
Sheet Metal Workers assemble, install, and repair products or equipment made of sheet metal and other specialty metals and materials.	WOIS-5484 DOT-804.281-010 OES-*	Slower than average 6% growth 2000–2008 \$1,387–\$5,150/month	OJT, VCC, TC, APP	Sheet Metal	CC: 20, 24 TC: 31, 33 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Shipfitters & Riggers work in teams to build and repair ships, i.e., freighters, submarines, and oil tankers. Shipfitters assemble steel plates and beams that form ships. Riggers install hoists and other equipment that move heavy loads.	WOIS-5485 DOT-806.381-046 DOT-806.261-014 OES-*	Declining 14% decline 2000–2008 30 openings/year \$2,088–\$3,820/month	OJT, HS, APP	Welding	Training is available through apprenticeship programs.
Stationary Engineers regulate and maintain equipment such as boilers and turbines that are used to supply heat, air conditioning, or power.	WOIS-5944 DOT-950.382-026 OES-*	Declining 3% decline 2000–2008 48 openings/year \$1,460—\$3,480/month	OJT, APP		Training is available through apprenticeship programs.
Surveyor Helpers perform technical tasks under the direction of a surveyor to assist in surveying land.	WOIS-2472 DOT-869.567-010 OES-22521	Slower than average 5% growth 2000–2008 42 openings/year \$1,200–\$3,800/month	CC, COL, TC	Civil Engineering Technology, Surveying, Graphic Information Systems	CC: 4, 9–10, 15, 20, 22, 24, 27, 30 TC: 31–32, 35 PCS:

Arts, Audio-Video Technology & Communications

Instructional programs and occupations dealing with designing, producing, exhibiting, performing, writing, and publishing multimedia content (includes visual, performing arts and design, journalism, and entertainment services).

- Audio & Video Technologies
- Commercial & Graphic Design
- Crafts & Fine Arts
- Journalism, Writing & Broadcasting
- Music & Performing Arts

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Actors & Actresses entertain audiences by portraying roles on television, radio, stage, or motion pictures. They may also engage in producing educational media and help promote products through various audiovisual media.	WOIS-9866 DOT-150.047-010 OES-34056	Average 13% growth 2000–2008 99 openings/year Earning vary greatly	OJT, HS, VOC, CC, COL, GRAD	Theater & Drama	CC: 8 U: 36–41, 51 PU: 55, 59–62, 64 PCS:
Advertising Workers work as a team planning and carrying out campaigns to persuade people to buy products or services.	WOIS-7492 OES-*	Average 8% growth 2000–2008 127 openings/year \$1,500–\$8,000/month	CC, COL	Advertising, Marketing, Communications, Journalism, Commercial Art, Graphic Design	CC: 1, 4–5, 7–8, 10–11, 15–18, 20, 23–25, 29, 30 TC: 33–34 U: 36–51 PU: 53–59, 61–65, 67 PCS:
Announcers provide live or prerecorded information and entertainment to radio, television, cable, and internet audiences.	WOIS-9824 DOT-159,147-010 OES-*	Slower than average 3% growth 2000–2008 45 openings/year \$1,165–\$16,000/month	OJT, HS, VOC, CC, TC, COL	Radio & Television, Broadcasting, Communications, Journalism	CC: 4–5, 8, 10, 15 TC: 31, 33 U: 36–51 PU: 53, 55, 58–59, 61–65, 67 PCS:
Artists creatively and visually express their thoughts and feelings.	WOIS-9834 DOT-144.061-010 OES-*	Faster than average 22% growth 2000–2008 275 openings/year Earnings vary greatly	OJT, VOC, COL	Fine Arts	U: 36–51 PU: 55, 59, 61–62, 64–67 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Broadcast Technicians install, operate, and maintain electronic equipment used to record or transmit radio and television programs. Specialties include transmitter or studio maintenance, audio or video control, lighting, field recording, and videotape technician.	WOIS-5664 DOT-194.262-022 OES-34028	Average 10% growth 2000–2008 22 openings/year \$1,165–\$??/month	VOC, CC, TC, APP	Communications, Electronics Technology CC: TC:	
Freelance Writers inform and entertain their readers in all forms of creative literary composition.	WOIS-2174 DOT-131.067-046	Not surveyed Earnings vary greatly	CC, COL	Journalism, Technical Communication	CC: 5, 15, 18 U: 36–51 PU: 53, 55, 59, 63, 65, 67
Graphic Designers illustrate ideas through sketches, drawings, and photographs. They prepare artwork for newspapers, magazine advertisements, and books. They may also create designs for commodity packages. Much of this work is accomplished using computers.	WOIS-4724 DOT-141.061-018 OES-34035	Faster than average 23% growth 2000–2008 132 openings/year \$1,833–\$3,745/month	VOC, CC, TC, COL, APP	Graphic Design & Commercial Art	CC: 4–6, 10, 18, 20, 25, 29 TC: 33–34 U: 42–46 PU: 65 PCS:
Industrial Designers combine technical knowledge with artistic talent to improve the form and design of products and their packaging and trademarks.	WOIS-4725 DOT-142.061-026 OES-34038	Faster than average 25% growth 2000–2008 166 openings/year \$1,600–\$4,000+/month	COL	Industrial Design	U: 42, 44–?? PCS:
Interior Designers & Decorators make homes, public buildings, and play areas more beautiful through planning and selection of colors, prints, wallpaper, fabrics, upholstery, and furniture styles. A number of interior designers are employed by office building management firms.	WOIS-4722 DOT-142.051-014 DOT-298.381-010 OES-34041	Faster than average 27% growth 2000–2008 116 openings/year \$1,165–\$4,100/month	VOC, CC, TC, COL	Interior Design	CC: 1, 12, 25 TC: 33 U: 47–50 PU: 61 PCS:
Jewelers may design, make, repair, and sell jewelry, watches, clocks, and other timepieces. Skilled crafts people make jewelry by hand, using their own designs.	WOIS-3184 DOT-700.281-010-2 OES-67005	Declining 9% decline 2000–2008 20 openings/year \$1,165–\$83,00/month	OJT, CC, TC, APP, COL	Metal Design, Clock Technology Art, Metals	CC: 13 U: 44–46

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Marketing Managers develop and evaluate strategies to increase sales of products or services for a company, division, or product line.	WOIS-1164 DOT-163.167-018 OES-13011	Faster than average 23% growth 2000–2008 392 openings/year \$1,667–\$7,309/month	COL, GRAD	Marketing Management, Marketing	U: 36–51 PU: 53, 59, 62–65 PCS:
Musicians sing or play musical instruments, performing alone, in a group, or as a member of a band or orchestra. Many musicians give private lessons.	WOIS-9867 DOT-152.041-010 OES-*	Faster than average 23% growth 2000–2008 156 openings/year Earnings vary greatly	OJT, HS, CC, COL, GRAD	Music, Music Performance	CC: 20, 25 U: 36–51 PU: 55, 58–61, 64–67 PCS:
Photofinishers develop film and print and enlarge pictures. They may operate automatic processing equipment.	WOIS-5934 DOT-976.687-018 OES-*	Slower than average 3% growth 2000–2008 5 openings/year \$1,165–2,790/month	OJT, HS, CC, TC	Printing, Graphic Arts, Photography	CC: 8, 18, 25
Photographers use cameras to visually record ideas and events. They should have an understanding of camera operation, lighting, composition, darkroom procedures, and special characteristics of films and papers. They may also use video cameras and video tape equipment.	WOIS-4734 DOT-143.062-030 OES-34023	Average 7% growth 2000–2008 116 openings/year \$1,165–\$3,675/month	OJT, VOC, CC, CC, TC, COL,	Photography	CC: 8, 18, 20, 25 U: 44–49 PCS:
Prepress Workers (also called Desktop Publishers) combine text and artwork to make printed materials such as books, magazines, newspapers, product packaging, and newsletters.	WOIS-4765 DOT-979.282-010 OES*	Faster than average 58% growth 2000–2008 \$1,165–\$3,010/month	CC, TC, COL	Graphic Arts/ Printing	CC: 5, 11, 18, 21–21, 25, 27 TC: 33 PU: 65
Press Operators set up, operate, and maintain printing presses. They work for magazines, newspapers, publishing houses, and other organizations that do their own printing.	WOIS-4771 DOT-651.382-042 OES-*	Average 15% growth 2000–2008 113 openings/year \$2,200–\$3,310/month	OJT, CC, TC, APP	Printing/ Graphic Arts	CC: 5, 11, 18, 20–21, 25, 27 TC: 33 PU: 65 PCS:
Public Relations Workers aid their firms or clients in building and maintaining favorable public images. They also assess public reactions to their firm's or client's activities.	WOIS-1195 DOT-165.167-014 OES-34008 OES-13011	Average 20% growth 2000–2008 369 openings/year \$1,500–\$6,029/month	COL, GRAD	Public Relations, Communications	U: 36–51 PU: 55, 58, 59, 61–65, 67

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Reporters gather information on newsworthy events and issues. They also write stories for publication or presentation in the news and broadcasting media.	WOIS-2173 DOT-131.262-018 OES-*	Average 18% growth 2000–2008 325 openings/year \$1,500–\$5,661/month	CC, COL, GRAD	Journalism	CC: 5, 15 U: 36–43, 47–51 PU: 53, 55, 59, 62, 66, 67
Singers & Dancers entertain audiences by singing or performing movement to music. There is a surplus of singers and dancers. This trend is expected to continue.	WOIS-9868 DOT-151.047-010 DOT-152.047-022 OES-*	Faster than average 23% growth 2000–2008 47 openings/year Earnings vary greatly	CC, COL, GRAD	Performing Arts	CC: 25 U: 36–51 PU: 55, 58–61, 64–67
Social Scientists study human behavior and environmental conditions to obtain information that will help solve complex social and environmental problems.	WOIS-2144 DOT-054.067-014 DOT-055.067-010 DOT-055.067-018 OES-*	Average 10% growth 2000–2008 36 openings/year \$1,500–\$3,214/month	COL, GRAD	Social Science, History, Sociology, Anthropology, Geography	U: 36–51 PU: 55–56, 59–67
Stage Technicians support production activities on theater, music, video, and film sets.	WOIS-9855 DOT-962.261-014	Not surveyed \$1,165–\$2,860/month	OJT, CC, COL	Theater Arts	CC: 8 U: 36–46 PU: 55, 59–64, 66
Technical Illustrators combine drafting and commercial art to prepare illustrations for manuals, text books, audiovisual presentations, brochures, or oral presentations.	WOIS-4726 DOT-017.281-034	Not surveyed \$1,250–\$3,666/month	OJT, HS, VOC, CC, TC, COL, APP	Technical Illustration, Commercial Art	CC: 11, 18, 20, 25 TC: 34 PU: 65 PCS:
Technical Writers write scientific and technical information in clear and easy to understand terms. They specialize in one or more subject areas and prepare manuals, catalogs, proposals, and instructional materials.	WOIS-2177 DOT-131.267-026 OES-34005	Faster than average 32% growth 2000–2008 \$1,800–\$5,000/month	COL, GRAD	Technical Communications	U: 42–50
Telecommunications Technicians install, maintain, and repair, residential and business telecommunication systems, local area networks, fiberoptics, terminal hardware and operating systems, analog and digital data circuits, and communications equipment.	WOIS-3166 DOT-822.281-022 DOT-822.381-018 OES-*	Slower than average 6% growth 2000–2008 73 openings/year \$1,210–\$3,990/month	OJT, HS, CC, TC	Telecommunications Technologies	CC: 5 TC: 33 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Telephone Operators tend to design, record, and edit electronic communication equipment for individuals and businesses.	WOIS-1454 DOT-235.662-022 OES-*	Declining 3% decline 2000–2008 120 openings/year \$1,165–\$2,143/month	APP		No approved/ accredited training programs in Washington.
Video Production Workers design, record, and edit videos for viewing by audiences.	WOIS-9826 DOT-143.062-022 OES-34026	Average 7% growth 2000–2008 5 openings/year \$1,636–\$4,550/month	CC, TC, COL	Multimedia Technology	CC: 1, 5, 7–8, 11, 15, 21, 27 TC: 31, 33 U: 42 PCS:

Business & Administration

Instructional programs and occupations dealing with planning, managing, and providing administrative support, information processing, business communications, accounting, and human resource management services and related business management support services.

- Accounting & Related Occupations
- Administrative Support Services
- Business Management

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Business Executives develop and administer policies to increase profits and make their organizations run smoothly.	WOIS-1144 DOT-189.117-026 OES-19005	Average 13% growth 2000–2008 2,605 openings/year Earnings vary greatly	COL, GRAD	Business Management, Business Administration	U: 36–51 PU: 52–54, 56, 58–65, 67
Business Managers prepare and review financial reports and implement company policies to ensure smooth and profitable business operations.	WOIS-1146 DOT-191.117-014 OES-189.167-022	Average 18% growth 2000–2008 2,845 openings/year \$2,333–\$6,132/month	COL, CC, GRAD	Business Administration	CC: 1, 3, 5–11, 13–17, 20, 22, 24–27, 29–30 TC: 32 U: 36–51 PU: 53–56, 58–65, 67 PCS:
Collection Workers locate people to notify them of overdue accounts or debts and try to secure payment or return of the merchandise.	WOIS-1637 DOT-241.357-010 OES-53508	Faster than average 31% growth 2000–2008 265 openings/year \$1,300–\$2,750/month	OJT, HS, CC, TC	Credit Specialist	CC: 7, 25 TC: 33
Cost Estimators collect and analyze information to determine how much it will cost to perform a service, manufacture a product, or complete a project.	WOIS-1626 DOT-169.267-038 OES-21902	Average 13% growth 2000–2008 147 openings/year \$1,500–\$5,105/month	COL, GRAD, APP	Business/ Economics, Computer Science, Construction Management, Engineering Management	U: 36–51 PU: 53, 55, 59–62, 65, 67
Customer Service Representatives assist consumers directly by handling requests and resolving complaints.	WOIS-7421 DOT-239.362-014 OES-55335	Not surveyed \$1,165–\$4,900/month	VOC, CC, TC, APP	Customer Service Representative	CC: 5, 16–17 TC: 33, 35
Data Entry Operators operate key-punch machines, similar to typewriters, to transcribe data from source material onto punch cards or tapes used in computers.	WOIS-1438 DOT-203.582-054 OES-56017	Slower than average 2% growth 2000–2008 56 openings/year \$1,165–\$3,200/month	OJT, HS, VOC, CC, TC, APP	Data Entry,	CC: 7, 10, 30 TC: 35 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Employment Interviewers identify candidates for filling job vacancies, and they assist jobless people in finding employment.	WOIS-1461 DOT-166.267-010 OES-21508	Average 7% growth 2000–2008 103 openings/year \$1,990–\$3,650/month	OJT, VOC, TC, CC	Receptionist	CC: 5–6, 12, 15–17, 22, 24, 26–27 TC: 32–35
General Office Clerks are assigned clerical duties in accordance with the office procedures of individual establishments. Duties may include a combination of bookkeeping, typing, stenography, and office machine operation.	WOIS-1418 DOT-209.562.010 OES-*	Average 7% growth 2000–2008 3,045 openings/year \$1,165–2,442/month	OJT, HS, VOC, CC, TC, APP	Office Assistant	CC: 5, 7–8, 10– 11, 13–18, 21– 25, 27–28 TC: 31–35 PCS:
Human Resource Managers serve as a link between management and employees. They help management in effective use of employees' skills. They help employees find satisfaction in their jobs and working conditions.	WOIS-1186 DOT-166.117-018 OES-*	Average 13% growth 2000–2008 220 openings/year \$1,800–\$6,358/month	TC, COL, GRAD, APP	Human Resource Management, Labor Relations	TC: 31, 34 U: 36–42 PU: 47–50
Human Resource Specialists provide clerical and specialist support to personnel departments.	WOIS-1472 DOT-166.267-046 DOT-166.267-038 OES*	Average 14% growth 2000–2008 345 openings/year \$1,387–\$4,268/month	TC, COL	Human Resource Management, Labor Relations	TC: 32, 34 U: 36–42 PU: 59, 65
Interviewing Clerks help people complete application forms at employment offices, banks, hospitals, and government licensing bureaus.	WOIS-1462 DOT-205.362-014 OES-*	Slower than average 2% growth 2000–2008 190 openings/year \$1,165–\$2,539/month	OJT, HS	No approved/ accredited training programs in Washington.	
Locksmiths install, maintain, and repair locks, safes, and security devices in businesses and homes.	WOIS-3188 DOT-709.281-010 OES-85923	Average 13% growth 2000–2008 27 openings/year \$1,165–\$2,930/month	OJT, HS, APP	Locksmith Training	Training is available through apprenticeship programs.
Management Analysts examine business or operating procedures and suggest changes that will help organizations solve problems and function more effectively and efficiently.	WOIS-1147 DOT-161.167-010 OES-21905	Average 20% growth 2000–2008 193 openings/year \$2,850–\$6,180/month	COL, GRAD	Business Administration, Accounting, Finance, Public Administration	U: 36–51 PU: 52–53, 55–56, 58–65, 67

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Messengers transport and deliver messages, documents, packages, and other items to offices or departments within a firm, to other businesses, or to private homes.	WOIS-1456 DOT-230.663-010 OES-57311	Average 11% growth 2000–2008 86 openings/year \$1,165–\$2,199/month			No approved/ accredited training programs in Washington.
Office Machine Operators use a variety of office equipment to speed the flow of data and paperwork.	WOIS-1439 DOT-214.482-010 OES-*	Declining 10% decline 2000–2008 187 openings/year \$1,165–\$2,248/month	CC, TC, APP	Secretarial Studies	CC: 1–2, 5–8, 11–17, 22, 28, 30 TC: 31–34
Office Managers maintain an efficient flow of work by evaluating, organizing, and directing office production.	WOIS-1411 DOT-169.167-034 OES-13014 ??-51002	Average 14% growth 2000–2008 1,443 openings/year \$1,200–\$5,966/month	HS, VOC, CC, TC, COL, APP	Managerial Courses	CC: 1, 4–5, 7–9, 12, 14–17, 20–22, 24–25, 27–26 TC: 2–33, 35 U: 36, 47–50 PU: 56 PCS:
Receptionists greet visitors, clients, or customers, determine the purpose of their visit, and direct them accordingly. They work as information clerks and answer telephones and operate telephone switchboards.	WOIS-1452 DOT-237.367-038 OES-55305	Faster than average 22% growth 2000–2008 1,469 openings/year \$1,165–\$2,500	OJT, HS, VOC, TC, CC	Receptionist	CC: 5–6, 12, 15–17, 22, 24, 26–27 TC: 32–34 PCS:
Researchers carry out studies, gather information, and make recommendations for action by administrators.	WOIS-2166 DOT-199.267-034 OES-25302	Slower than average 5% growth 2000–2008 33 openings/year \$2,200–\$4,560/month	COL, GRAD	Research	U: 36–51 PU: 53, 55–56, 59–67
Secretaries perform a variety of clerical and organizational duties. They take dictation, type, handle correspondence, keep files, and schedule appointments. Some secretaries prepare reports, and many operate various pieces of office equipment.	WOIS-1442 DOT-201.362-030 OES-55108	Slower than average 4% growth 2000–2008 1,093 openings/year \$1,165–\$3,044/month	OJT, HS, VOC, CC, TC, APP	Secretarial Science	CC: 1–2, 5–8, 11–17, 22–28, 30 TC: 31–34 PCS:
Small Business Operators run various business establishments, manufacturing products and selling goods and services to their customers.	WOIS-1142	Outlook and wages vary greatly, depending on the business.	HS, CC, TC, COL, GRAD	Business Administration	CC: 1, 5–11, 13–17, 20, 22, 24–27 U: 36–51 PU:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Word Processing Operators type correspondence, reports, insurance policies, and other material into a computer. They read the material for errors, make corrections, and print final copies. They also combine or transfer data between files and make revisions.	WOIS-1421 DOT-203.382-030 OES-55307	Declining 8% decline 2000–2008 209 openings/year \$1,165–\$2,917/month	OJT, HS, VOC, CC, TC	Word Processing	CC: 1–2, 5–6, 8, 11–13, 15, 21–26, 28, 30 PCS:

Education & Training

Instructional programs and occupations dealing with planning, administering, managing, and providing education and training services; related learning support services such as library, information services, child care, and counseling services; and preparatory medical training in educational settings.

- Child Care
- Education Administration, Evaluation & Curriculum
- Education Counseling
- Librarianship
- Preprofessional Medical Studies
- Teaching/Training

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Education Administrators manage school systems to promote successful academic programs for students and staff members and provide efficient business operations. Examples of jobs include college presidents, school superintendents, principals, directors, and business managers.	WOIS-1136 DOT-099.117-018 DOT-099.117-010 OES-*	Average 19% growth 2000–2008 415 openings/year \$3,000–\$6,700/month	COL, GRAD, LIC	Education Administration	U: 36, 42, 44–46 PU: 53, 55–56, 59, 61–65, 67
Elementary Teachers teach a wide range of academic, social, emotional, and motor skills in first through sixth grade. Teachers plan and present instruction to meet student needs according to district and state requirements. They teach reading, math, science, language arts, social studies, and physical education. Some elementary teachers only teach one subject to a number of classes.	WOIS-8455 DOT-092.227-010 OES-31305	Average 19% growth 2000–2008 1,404 openings/year \$1,910–\$3,235/month	COL, GRAD, LIC	Elementary Education	U: 36–51 PU: 52–53, 55–56, 58–61, 65–67
Kindergarten Teachers teach music, art, literature, social skills, and personal hygiene to children from five to six years old.	WOIS-8451 DOT-092.227-014 OES-31302	Average 15% growth 2000–2008 363 openings/year \$2,760/month	COL, GRAD, LIC	Kindergarten Education, Early Childhood Education	U: 36–51 PU: 55–56, 60–62, 67
Librarians maintain a library's collection of materials such as books, magazines, films, and records and assist groups and individuals in locating and using these materials.	WOIS-8492 DOT-100.127-014 OES-31502	Average 15% growth 2000–2008 150 openings/year \$2,310–\$4,570/month	COL, GRAD, LIC	Library Science	U: 42, 44–46

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Library Assistants & Technicians aid librarians in maintaining, tracing, and checking out library material. They also provide information to library patrons.	WOIS-1428 DOT-249.367-046 OES-*	Average 21% growth 2000–2008 312 openings/year \$1,177–\$2,872	HS, CC, TC	Library Technology	CC: 11, 25 TC: 34
Rehabilitation Counselors help individuals with physical, mental, emotional, or social disabilities adjust to their conditions and become self-sufficient.	WOIS-8412 DOT-045.107-042 DOT-045.107-058 OES-31514	Average 18% growth 2000–2008 99 openings/year \$2,200–\$3,960/month	CC, TC, COL, GRAD, LIC	Social Service, Chemical Dependency Counseling	CC: 1, 5–7, 9, 12, 15–18, 20, 25, 28, 30 U: 36–56 PU: 52–53, 55–56, 58–67
School Counselors help students make the best use of the learning opportunities offered by the school. They are concerned with the personal, social, educational, and vocational development of students.	WOIS-8416 DOT-045.107-010 OES-31514	Average 18% growth 2000–2008 99 openings/year \$2,360–\$3,660/month	COL, GRAD, LIC	Educational Psychology, Guidance & Counseling	U: 36–51 PU: 53, 56, 60–65, 67
School Psychologists use their knowledge of psychology to serve the mental health and educational needs of children and young people.	WOIS-8414 DOT-045.107-034	Not surveyed \$1,500–\$3,890/month	COL, GRAD, LIC	School Psychology	U: 36–42, 44–46 PU: 61–62
Secondary Teachers instruct students in one or more subject areas in junior or senior high schools. They often work with students in extracurricular activities.	WOIS-8456 DOT-091.227-010 OES-31308	Average 18% growth 2000–2008 1,622 openings/year \$3,230–\$4,080/month	COL, GRAD, LIC	Secondary Education	U: 36–51 PU: 52–53, 55–56, 58–67
Special Education Teachers instruct students with physical, mental, emotional, or learning impairments. They are involved in developing programs of study and in working with parents as part of their instructional responsibilities. They act as classroom managers, as well as teachers.	WOIS-8459 DOT-094.227-010 OES-31311	Average 18% growth 2000–2008 270 openings/year \$1,945–\$3,180/month	COL, GRAD, LIC	Special Education	U: 36–42, 47–50 PU: 53, 55–56, 59–62, 67
Teacher Assistants assist teachers by performing tasks such as grading papers, duplicating materials, and supervising play activities.	WOIS-8465 DOT-249.367-074 DOT-099.327-010 OES-*	Average 17% growth 2000–2008 1,005 openings/year \$1,165–\$2,600/month	OJT, HS, CC, TC	Educational Aide, Instructional Aide	CC: 2, 5, 8, 11, 16–17, 20, 26, 29, 30 TC: 32–33, 35 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
University & College Teachers educate and train postsecondary students. They specialize in teaching particular subjects. They advise students regarding curriculum requirements, conduct and supervise research, and serve on various college and university committees.	WOIS-8454 DOT-090.227-010 OES-*	Average 18% growth 2000–2008 1,610 openings/year \$2,830–\$7,280/month	COL, GRAD	Content Area	U: 36–51 PU: 52–53, 55–56, 59–65, 67
Vocational Teachers teach skills required for employment in a specific occupation. Specializations include agriculture, business education, marketing education, home and daily life, technical, trade and industrial fields, health occupations, and industrial arts.	WOIS-8452 DOT-091.221-010 OES-31314	Average 17% growth 2000–2008 219 openings/year \$1,700–\$3,930/month	CC, COL, VOC, LIC, APP	Vocational-Technical Education	CC: 23–24 U: 36–51 PU: 52–53, 55–56, 61–62, 67

Finance

Instructional programs and occupations dealing with banking, investment, financial planning, economics, and insurance services, including managing and planning for firms and businesses involved in such services.

- Banking & Finance
- Financial Planning
- Insurance Services

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Accountants & Auditors prepare and analyze business and government records and financial reports needed for effective management. These reports also provide information to investors, creditors, and government agencies.	WOIS-1614 DOT-160.162-018 OES-21114	Average 11% growth 2000–2008 829 openings/year \$1,500–\$4,536/month	COL, GRAD, LIC	Accounting	U: 36–42, 44–51 PU: 53, 55–56, 59–62, 65, 67
Bank Tellers receive and pay out money, keep records of customers' transactions, cash checks, and perform other banking duties.	WOIS-1644 DOT-211.362-018 OES-*	Slower than average 3% growth 2000–2008 532 openings/year \$1,165–\$2,073/month	OJT, HS, VOC, CC, TC	Teller Training	CC: 12, 24 TC: 35 PCS:
Bookkeepers record day-to-day business transactions and maintain systematic, up-to-date records of financial affairs. Computer skills may be necessary.	WOIS-1616 DOT-210.382-014 OES-55338	Slower than average 0% growth 2000–2008 513 openings/year \$1,165–\$4,200/month	OJT, HS, VOC, CC, TC, APP	Bookkeeping, Accounting (1 or 2-year programs)	CC: 1–30 TC: 31–35
Bookkeeping & Accounting Clerks keep daily financial records of a business or company. They also calculate employee wages and may prepare tax reports. Audit Clerks verify financial transactions inside and outside the company.	WOIS-1619 DOT-216.482-010 OES-*	Slower than average 2% growth 2000–2008 824 openings/year \$1,165–\$3,900/month	OJT, HS, VOC, CC, TC, APP	Accounting (1- or 2-year programs)	CC: 1–30 TC: 31–35 PCS:
Claim Adjusters investigate, evaluate, and settle claims on insurance policies resulting from accidents, fires, injuries, embezzlement of funds, and property loss and damage.	WOIS-1632 DOT-241.217-010 OES-*	Average 18% growth 2000–2008 161 openings/year \$1,500–\$4,654/month	OJT, CC, TC, COL, LIC	Insurance, Business Administration	CC: 1, 3, 5–11, 13–, 20, 22, 24–27, 30 TC: 34 U: 36–51 PU: 53, 55–56, 58–65, 67

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Financial Institution Managers oversee the operations of banks, savings and loan associations, credit unions, and related financial services.	WOIS-1148 DOT-186.167-086 OES-*	Average 14% growth 2000–2008 742 openings/year \$1,400–\$6,557/month	COL, GRAD	Finance U: 42, 44–57 PU: 53, 61, 65	
Financial Planners develop and coordinate financial plans to help individuals, businesses, and organizations reach their financial goals.	WOIS-1615 DOT-250.257-014 OES-*	Faster than average 32% growth 2000–2008 100 openings/year Earnings vary greatly	COL, GRAD, LIC	Finance	U: 42, 44–46, 51 PU: 53, 62, 65
Income Tax Advisors help individuals prepare and complete tax forms.	WOIS-1612 DOT-219.362-070 OES-21111	Slower than average 6% growth 2000–2008 50 openings/year \$1,165–\$4,170/month	VOC, COL	Income Tax Practitioner	CC: 13 PCS:
Insurance Agents sell individual and group insurance policies. Agents provide advice to clients on their insurance needs regarding the type and amount needed.	WOIS-7416 DOT-250.257-010 OES-43002	Average 11% growth 2000–2008 246 openings/year \$1,165–\$3,988	OJT, HS, VOC, COL, APP, LIC	Insurance	TC: ?? U: 34 PCS:
Loan Officers evaluate applicants' financial backgrounds to determine their eligibility for loans.	WOIS-1636 DOT-186.267-018 OES-*	Faster than average 22% growth 2000–2008 280 openings/year \$1,400–\$4,180	OJT, COL	Accounting, Banking, Business Administration	U: 36–51 PU: 52–53, 55–56, 58–65, 67
Securities Sales People counsel clients regarding investment opportunities. Clients may be individuals, groups, or businesses. Security salespeople buy, sell, or transfer stocks and bonds for clients. They may specialize in one area of the economy, dealing mainly with auto, precious metals, oil, or pharmaceutical stocks. Those who deal with agricultural products are called Commodity (Futures) Brokers.	WOIS-7415 DOT-250.257-018 OES-*	Faster than average 32% growth 2000–2008 183 openings/year \$1,200–\$8,939/month	OJT, COL, LIC	Finance, Economics	U: 36–51 PU: 53, 55, 59, 61–67
Underwriters review insurance applications, determine the risk involved, and accept or reject applications based on a company's underwriting policies. Most underwriters specialize in property, life, liability, or health.	WOIS- 1635 DOT-169.267-046 OES-21102	Average 7% growth 2000–2008 58 openings/year \$2,011–\$4,496/month	COL	Business Administration	U: 36–51 PU: 53, 55–56, 58–65, 67

Government & Public Administration

Instructional programs and occupations dealing with planning, managing, and providing government legislative, administrative, and regulatory services; includes government services at the federal, state, and local levels such as public finance and planning.

- Governmental Relations
- Public Administration
- Public Finance & Planning

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Customs Inspectors inspect people, cargo, and other goods to enforce regulations and laws regarding the type and amount of goods that may enter or leave the country.	WOIS-9475 DOT-168.267-022	Not surveyed \$1,709–\$3,145+/month	CC, COL	Criminal Justice & Law Enforcement	CC: 1, 4–6, 8–12, 14–17, 21–21, 24, 26–27, 30 U: 36, 42, 47–50 PU: 55, 60–61
Government Executives oversee and regulate the operations and policies of governments to meet the needs of the people they serve.	WOIS-1139	Not surveyed Earnings vary greatly	COL, GRAD	Public Administration, Political Sciences, Business Administration, Law	U: 36–51 PU: 52–53, 55–56, 58–67
Mail Carriers collect and deliver letters, magazines, and packages along assigned routes.	WOIS-7122 DOT-230.367-010 OES-57305	Slower than average 4% growth 2000–2008 203 openings/year \$1,655–\$3,150/month	OJT, HS	No approved/ accredited training programs in Washington.	
Park Rangers & Naturalists work to preserve and teach an appreciation of our natural and historical heritage.	WOIS-9422 DOT-169.167-042	Not surveyed \$1,580–\$3,010/month	COL	Parks & Community Recreation Management	U: 42, 44–51 PU: 55, 59
Postal Clerks are responsible for organizing all mail that goes through the post office. They may also sell stamps, postal insurance, and register letters.	WOIS-7123 DOT-243.367-014 OES-57308	Slower than average 4% growth 2000–2008 136 openings/year \$1,213–\$3,558/month	OJT, HS	No approved/ accredited training programs in Washington.	

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Public Administrators coordinate and direct public services in order to meet the needs of the community or state.	WOIS-1138 OES-*	Average 9% growth 2000–2008 62 openings/year \$2,860–\$6,350/month	COL, GRAD	Public Administration, Business Administration	U: 36, 47–51 PU: 52–53, 55–56, 58–65, 67
Road Maintenance Workers perform a wide variety of skilled and semiskilled tasks to maintain highways, city, and rural roads, and the surrounding landscape.	WOIS-4285 DOT-899.684-014 OES-87711	Declining 3% decline 2000–2008 61 openings/year \$1,966–\$3,688/month	OJT, HS	Heavy Equipment Operation PCS:	
Urban & Regional Planners plan for the overall growth and improvement of cities, counties; and metropolitan areas.	WOIS-2167 DOT-199.167-014 OES-27105	Average 10% growth 2000–2008 51 openings/year \$1,600–\$6,635/month	COL, GRAD	Urban & Regional Planning	U: 36–42, 44–50
Wastewater Treatment Plant Operators work with sewage treatment, sludge processing, and disposal equipment to control the flow and processing of waste.	WOIS-5946 DOT-955.362-010 OES-95002	Faster than average 24% growth 2000–2008 72 openings/year \$1,165–\$3,620/month	OJT, HS, CC, LIC, APP	Water & Wastewater Technology	CC: 10, 22

Health Science

Instructional programs and occupations dealing with planning, managing, and providing diagnostic, therapeutic, treatment, research, and information services related to the physical and mental health of humans.

- Diagnostic & Treatment Technologies
- Health & Medical Care Services
- Health Treatment Specialties
- Medical Science & Research
- Mental Health Services

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Acupuncturists use a form of Chinese medicine called acupuncture to diagnose, treat, and restore the health of their patients.	WOIS-8111 DOT-079.271.010	Not surveyed \$2,500-\$5,000/month	COL, GRAD, LIC	Acupuncture, Chinese Medicine	PCS:
Cardiovascular Technologists work with doctors to diagnose and treat diseases of the heart and circulatory system. They may specialize in invasive or noninvasive procedures.	WOIS-8157 DOT-078.362-030 DOT-078.364-014 DOT-078.362-018 OES-32925	Slower than average 4% growth 2000–2008 14 openings/year \$2,300–\$3,970/month	OJT, HS, CC, COL	Cardiovascular Technology	CC: 24
Chiropractic Technicians provide clinical and office assistance to chiropractors. They help with physical examinations of patients and perform general office duties.	WOIS-8175 DOT-079.364-010	Not surveyed \$1,165–\$2,610/month	OJT, CC	Chiropractic Technician	CC: 11
Chiropractors treat patients by manually adjusting parts of the body, giving special attention to the spine and nervous system.	WOIS-8122 DOT-079.101-010	Not surveyed \$2,000–\$15,000/month	COL, LIC	Chiropractic	No approved/ accredited training programs in Washington.
Dental Assistants aid dentists by preparing patients for examination and treatment. They may also perform laboratory procedures.	WOIS-8176 DOT-079.361-018 OES-66002	Faster than average 32% growth 2000–2008 509 openings/year \$1,560–\$2,850/month	OJT, VOC, CC, TC	Dental Assisting	CC: 11, 19, 22, 24 TC: 31–35 PCS:
Dental Hygienists assist dentists by cleaning, polishing, and taking x-rays of patients' teeth. Hygienists instruct patients in proper oral hygiene.	WOIS-8152 DOT-078.361-010 OES-32908	Faster than average 38% growth 2000–2008 364 openings/year \$2,480–\$6,860	CC, TC, COL, LIC	Dental Hygiene	CC: 5, 16–17, 30, 30 TC: 34 U: 42, 44–46

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Dental Laboratory Technicians make and repair various dental appliances, such as dentures and crowns, according to written instructions and patients' mouth impressions taken by dentists.	WOIS-2655 DOT-712.381-018 OES-89921	Faster than average 23% growth 2000–2008 69 openings/year \$1,210–\$2,930/month	OJT, HS, VOC, TC, APP	Dental Laboratory Technician	TC: 31
Dentists diagnose and treat patients with diseases, injuries, or malformations of the teeth, gums, and mouth. They fill cavities, extract teeth, perform corrective surgery, and help patients prevent such problems.	WOIS-8142 DOT-072.101-010 OES-32105	Average 11% growth 2000–2008 137 openings/year \$4,170–\$28,480/month	GRAD, LIC	Dentistry	U: 44–46
Dietitians promote and maintain health, prevent or treat illness, and aid rehabilitation through nutrition, education, and diet.	WOIS-8136 DOT-077.127-010 DOT-077.127-014 OES-*	Average 15% growth 2000–2008 53 openings/year \$2,200–\$3,710/month	COL, GRAD, LIC	Nutrition	U: 36–41, 44–50 PU: 61
Electroneurodiagnostic Technologists operate specialized equipment that measures and records electrical brain activity. This process is used by physicians in diagnosing brain disorders and assessing brain damage.	WOIS-8156 DOT-078.362-022 OES-32923	Average 17% growth 2000–2008 6 openings/year \$900–\$3,910/month	OJT, HS	Electrodiagnostic Technology PCS:	
Emergency Medical Technicians (also called Paramedics) work as members of emergency teams, providing immediate first-aid treatment and transporting sick and injured people to medical facilities.	WOIS-8168 DOT-079.374-010 OES-32508	Faster than average 36% growth 2000–2008 \$1,335–\$4,586/month	HS, CC, TC, COL, APP, LIC	Emergency Medical Technician, Paramedic Training	CC: 13, 24, 26 U: 36–41 PCS:
Health Aides perform a variety of duties in connection with health services provided in the community.	WOIS-8178 DOT-335.354-010 DOT-354.377-010 DOT-355.377-118 DOT-355.377-014 DOT-354.677-010 OES-*	Average 18% growth 2000–2008 295 openings/year \$1,165–\$2,320	OJT, HS, VOC, CC, TC, LIC	Health Technology, Gerontology, Health Care Assistant	CC: 2, 5–7, 10–13, 17, 19, 21–22, 25–28, 30 TC: 32, 35 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Health Service Administrators manage hospitals and other health facilities and their staffs to assure satisfactory patient care.	WOIS-1134 DOT-187.177-010 OES-15008	Faster than average 22% growth 2000–2008 244 openings/year \$2,790–\$6,090/month	COL, GRAD, LIC	Health Care Administration	U: 42, 44–50 PCS:
Health Technicians & Technologists use medical equipment to aid in the diagnosis and therapy of various health problems.	WOIS-8155 DOT-078.362-014 DOT-078.261-014 DOT-078.361-038 DOT-712.381-034 DOT-712.381-038 OES-*	Average 18% growth 2000–2008 455 openings/year \$1,127–\$2,790/month	OJT, CC, TC, COL, APP	Health Technology	CC: 6, 16–17, 20, 25, 28 TC: 33–34 U: 42, 44–46 PU: 59, 61 PCS:
Health Therapists help patients regain control of their lives. Art and music therapists work primarily with psychiatric patients. Recreational and manual arts therapists work with people of all ages. Orientation therapists help newly blind individuals relearn daily living skills.	WOIS-8126 DOT-076.127-014 DOT-076.127-010 DOT-076.124-014 OES-*	Faster than average 25% growth 2000–2008 41 openings/year \$1,165–\$3,580/month	COL, GRAD, APP	Activities Therapy, Health Science, Rehabilitation Medicine, Occupational Therapy	U: 42, 44–46 PU: 64–65 PCS:
Home Health Aides provide basic health care, personal care, and emotional support to elderly, ill and disabled people in the patients' homes.	WOIS-8179 DOT-354.377-014 OES-66011	Average 20% growth 2000–2008 641 openings/year \$1,165–\$2,080/month	OJT, CC, TC, LIC	Nursing Assistant, Gerontology Aide	CC: 2, 5–8, 10, 12–13, 16–17, 19, 21–22, 25–28, 30 TC: 32, 35 PU: 56 PCS:
Licensed Practical Nurses give routine health care and personal care to patients and assist registered nurses and physicians with patients who are seriously ill. They provide care to patients in hospitals, clinics, private homes, and other settings.	WOIS-8164 DOT-079.374-014 OES-32505	Average 16% growth 2000–2008 432 openings/year \$1,910–\$2,840/month	CC, TC, LIC	Practical Nursing	CC: 2, 4–6, 8–10, 12–17, 21–22, 24, 27–28, 30 TC: 31–35

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Massage Therapists use their hands to provide treatment for body muscles and for improving circulation, increasing joint flexibility, relieving pain due to tension or overexertion, and relieving general tension.	WOIS-8641 DOT-334.374-010	Not surveyed \$1,440+/month Earnings vary greatly	VOC, LIC	Massage Therapy	TC: 33, 35 PCS:
Medical Assistants perform basic office, laboratory, and clinical duties to assist physicians in caring for patients. They prepare treatment rooms, supplies, instruments, and patients for physician and hand instruments and materials to physician as directed.	WOIS-8186 DOT-079.362-010 OES-66005	Faster than average 46% growth 2000–2008 419 openings/year \$1,390–\$2,610/month	HS, VOC, CC, TC	Medical Assistant	CC: 8, 10–15, 19, 22, 24, 29 TC: 31, 33–35 PCS:
Medical Laboratory Technicians/Technologists perform lab tests to provide information for use by physicians in detecting, diagnosing, or treating diseases.	WOIS-8154 DOT-078.381-014 DOT-078.261-038 OES-*	Faster than average 22% growth 2000–2008 237 openings/year \$1,960–\$3,930/month	HS, CC, TC, COL	Medical Laboratory Technology	CC: 5, 20, 24, 26 TC: 33, 35 U: 36–42, 44–46 PU: 59, 62
Medical Records Technicians compile, verify, file, and maintain medical records of hospital and clinic patients for use by physicians, for research and study, and to develop medical statistics.	WOIS-1431 DOT-079.362-014 OES-32911	Faster than average 41% growth 2000–2008 183 openings/year \$1,508–\$2,700/month	OJT, HS, VOC, CC	Medical Records Technology	CC: 5, 20, 24, 26
Medical Secretaries perform clerical and administrative support duties in medical offices.	WOIS-1446 DOT-201.362-014 OES-55105	Faster than average 22% growth 2000–2008 186 openings/year \$1,165–\$2,587/month	OJT, HS, VOC, CC, TC, COL	Medical Secretarial Courses	CC: 4–9, 11–12, 14, 16–17, 20–22, 24, 26–28, 30 TC: 32, 34–35 PCS:
Midwives are trained professionals who provide health care and support to a woman and her newborn during the normal childbearing cycle.	WOIS-8169 DOT-075.264-014	Not surveyed \$1,165–\$5,810/month	VOC, COL, GRAD, LIC	Midwifery PCS:	
Naturopathic Physicians treat a variety of health problems, using natural therapies.	WOIS-8123 DOT-079.101-014	Not surveyed \$2,000–\$3,333/month	COL, LIC	Naturopathic Medicine	No approved/ accredited training programs in Washington.

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Nurse Practitioners are specialists who provide general medical care to patients in health care facilities. They independently perform tasks that were once done only by licensed physicians.	WOIS-8163 DOT-075.264-010 OES-32502	Average 13% growth 2000–2008 121 openings/year \$3,100–\$5,290/month	COL, GRAD, LIC	Nursing, Nurse Practitioner	U: 42, 44–50 PU: 55, 57, 59, 61–62, 65, 67
Nursing Assistants assist in the care of hospital patients under the direction of nursing and medical staff. They may make beds, serve meals, and bathe patients.	WOIS-8174 DOT-355.674-014 DOT-335.674-018 OES-66008	Average 19% growth 2000–2008 856 openings/year \$1,165–\$2,360/month	OJT, VOC, CC, TC, LIC	Nursing Assistant	CC: 2, 5, 8, 12–13, 16–17, 19, 21–22, 26–28, 30 TC: 32, 35 PCS:
Occupational Therapists plan and organize activities to improve the function of physically, mentally, or emotionally disabled patients. They plan and direct educational, vocational, and recreational activities to help patients become as self-sufficient as possible in self-care and daily life.	WOIS-8125 DOT-076.121-010 OES-32305	Faster than average 31% growth 2000–2008 88 openings/year \$2,250–\$5,550/month	COL, GRAD, LIC	Occupational Therapy	U: 42, 44–46 PU: 64
Opticians measure and fit eyeglasses and grind the lenses according to prescriptions from optometrists and ophthalmologists.	WOIS-2656 DOT-299.361-010 DOT-716.280-014 OES-*	Slower than average 5% growth 2000–2008 66 openings/year \$1,165–\$3,250/month	OJT, HS, CC, APP, LIC	Optical Dispensing, Optometric Technology	CC: 18, 24
Optometrists provide vision care services to help people preserve and improve their vision. They conduct examinations to detect vision problems, eye diseases, and other abnormal conditions affecting vision.	WOIS-8134 DOT-079.101-018 OES-32108	Declining 3% decline 2000–2008 21 openings/year \$5,000–\$9,500/month	GRAD, LIC	Preoptometry	No approved/ accredited training programs in Washington.
Pharmacists interpret prescriptions, review patient profiles, and prepare, compound, and dispense medication prescribed by physicians and other authorized medical specialists. They dispense nonprescription medications to the public and provide information about medicines to consumers and health care providers.	WOIS-8124 DOT-074.161-010 OES-32517	Average 17% growth 2000–2008 184 openings/year \$4,360–\$6,800	COL, GRAD, LIC	Pharmacy	U: 44–50

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Pharmacy Technicians & Assistants help pharmacists by performing certain technical tasks and serving customers.	WOIS-8181 DOT-074.381-010 OES-66026 OES-32518	Average 17% growth 2000–2008 124 openings/year \$1,390–\$2,480/month	OJT, HS, CC, TC, LIC	Pharmacy Assistant/ Technician Training	CC: 5–6, 9, 13, 24, 26 TC: 333, 35 PCS:
Physical Therapists plan and administer medically prescribed therapy programs for the rehabilitation of people with muscle, bone, nerve, or joint injuries.	WOIS-8127 DOT-076.121-014 OES-32308	Faster than average 36% growth 2000–2008 174 openings/year \$2,860–\$5,600/month	COL, GRAD, LIC	Physical Therapy	U: 42, 44–46 PU: 64
Physician Assistants provide patient services under the supervision and responsibility of a physician. They take patients' medical histories, order lab tests and x-rays, counsel patients, etc.	WOIS-8121 DOT-079.364-018 OES-32511	Faster than average 29% growth 2000–2008 90 openings/year \$2,800–\$5,000/month	COL, LIC	Physician Assistant Training (medex)	U: 44–46
Physicians diagnose and treat human diseases and injuries, as well as practice preventive medicine. Some combine medical practice with research or teaching in medical schools.	WOIS-8112 DOT-070.101-022 OES-32102	Average 12% growth 2000–2008 312 openings/year Earnings vary greatly (\$2,782–\$33,070/mo.)	GRAD, LIC	Medicine	U: 44–46
Psychologists study the capacities, interests, and behavior of people in order to understand and explain the way they act and respond. They may specialize in areas such as clinical, child, developmental, and analytical psychology.	WOIS-8434 DOT-045.107-022 DOT-045.107-026 OES-27108	Average 9% growth 2000–2008 75 openings/year \$2,600–\$6,430/month	COL, GRAD, LIC	Clinical Psychology, Experimental Psychology, Psychology	U: 36–51 PU: 52–53, 55–56, 58–67
Radiologic Technicians use x-ray, ultrasound, or magnetic scanning equipment to aid in the diagnosis and treatment of patients with various health problems. Some do radiation therapy work by administering prescribed doses of radiation to affected areas of the body.	WOIS-8153 DOT-078.361-034 DOT-078.362-026 OES-*	Average 18% growth 2000–2008 142 openings/year \$1,900–\$4,070/month	VOC, CC, COL, LIC	Radiologic Technology, Diagnostic Ultrasound	CC: 1, 26, 28, 30 PU: 62 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Registered Nurses care for sick and injured people using procedures that require specialized skills. They are highly trained and are licensed by the state in which they work. Nurses may work in a variety of settings, including schools, hospitals, and public health facilities.	WOIS-8162 DOT-075.364-010 OES-32502	Average 13% growth 2000–2008 1,090 openings/year \$1,900–\$5,490/month	CC, COL, GRAD, LIC	Registered Nursing	CC: 1–2, 5–6, 8–9, 11–12, 14–15, 19–22, 26, 30 U: 42, 44–46 PU: 55, 58–59, 62–62, 65, 67
Respiratory Therapists work under the supervision of physicians with patients who have difficulty breathing because of lung or heart disorders. Cases may range from asthma, emphysema, bronchitis, or pneumonia to emergency care for heart failure, chest injuries, premature birth, or postsurgical complications.	WOIS-8165 DOT-076.361-014 OES-32302	Faster than average 30% growth 2000–2008 69 openings/year \$1,600–\$3,320/month	CC, COL	Respiratory Therapy	CC: 11, 18, 24, 26
Speech-Language Pathologists evaluate and treat speech, language, voice, and fluency disorders. Audiologists evaluate and treat hearing disorders. These specialties are interrelated. To be competent in one, it is necessary to be familiar with both.	WOIS-8128 DOT-076.107-010 DOT-076.101-010 OES-32314	Faster than average 27% growth 2000–2008 85 openings/year \$2,950–\$5,200/month	COL, GRAD	Speech Pathology & Audiology, Speech & Hearing Science	U: 42, 44–51
Surgical Technologists work as part of a health care team to create a safe and sterile environment for patients before, during, and after surgery.	WOIS-8182 DOT-079.374-022 OES-32928	Average 16% growth 2000–2008 33 openings/year \$1,990–\$2,700/month	CC, TC, VOC	Surgical Technology	CC: 18, 24 TC: 33, 35
Therapist Assistants support occupational or physical therapists in therapy that helps patients regain, improve, or adjust to physical or mental capacities. Aides support therapists and assistant therapists.	WOIS-8183 DOT-076.224-010 DOT-076.364-010 OES-66017 OES-66021	Faster than average 44% growth 2000–2008 190 openings/year \$1,165–\$3,040/month	OJT, VOC, CC, LIC	Occupational Therapy or Physical Therapy Assisting	CC: 10, 25, 29–30 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Veterinarians diagnose, treat, and control diseases and injuries of animals. They perform surgery and prescribe and administer medicine.	WOIS-8132 DOT-073.101-010 OES-32114	Average 9% growth 2000–2008 66 openings/year \$1,670–\$5,420/month	COL, GRAD, LIC	Veterinary Medicine	U: 47–50
Veterinary Technicians assist veterinarians in the handling and health care of animals, including surgical assistance and both pre- and postoperative care.	WOIS-8131 DOT-079.361-014 OES-32951 OES-79806	Average 12% growth 2000–2008 63 openings/year \$1,210–\$2,600/month	HS, CC, TC, LIC	Veterinarian Assistant Training, Veterinary Technology	CC: 16–17, 30 TC: 32 PCS:

Hospitality & Tourism

Instructional programs and occupations dealing with the provision of lodging, food, recreation, conventions, tourism, travel, and related planning and support services.

- Food Preparation & Services
- Lodging, Housekeeping & Janitorial
- Recreation, Gaming & Sports
- Travel & Tourism

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Bartenders mix and serve alcoholic and nonalcoholic beverages following standard recipes or customers' requests. They work in bars, hotels, private clubs, and restaurants.	WOIS-7852 DOT-312.474-010 OES-65005	Average 8% growth 2000–2008 612 openings/year \$1,165–\$1,560/month	OJT, VOC	Food & Beverage Service, Mixology & Bar Management	PCS:
Buspersons clear tables and counters in eating places to prepare for the next customers.	WOIS-7888 DOT-311.677-018 OES-65014	Average 16% growth 2000–2008 451 openings/year \$1,165–\$1,265/month	OJT, LIC		No approved/ accredited training programs in Washington.
Casino Workers conduct card games or games of chance for customers in gambling casinos.	WOIS-9841 DOT-343.464-010	Not surveyed \$1,165/month+tips	OJT	Casino Gaming	No approved/ accredited training programs in Washington.
Chefs prepare and cook food; usually in large quantities. They may specialize in a particular type of food and may be employed in hotels and specialty restaurants.	WOIS-7824 DOT-313.131-014 OES-65026	Average 20% growth 2000–2008 446 openings/year \$1,165–\$4,583+/month	OJT, HS, VOC, CC, TC, COL, APP	Culinary Arts	CC: 5, 7, 13–14, 16–18, 21–24 TC: 31–32, 34–35 U: 36 PCS:
Dinner Cooks prepare, season, and cook various soups, meats, vegetables, desserts, and other foods for the public.	WOIS-7825 DOT-313.361-014 OES-*	Average 17% growth 2000–2008 734 openings/year \$1,165–\$2,270/month	OJT, HS, VOC, CC, TC, APP, LIC	Culinary Arts	CC: 5, 7, 13–14, 18, 21–24 TC: 31–32, 34–35 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Food Preparation & Service Workers prepare food and beverages in restaurants, hotels, hospitals, and other establishments that serve food. Depending on the type of food service, they may make salads, coffee, or sandwiches; assemble food in the kitchen; help the cook; or supply a food counter. They may also unload supplies from delivery trucks and clean work areas and equipment.	WOIS-7848 DOT-317.687-010 DOT-318.687-010 DOT-317.664-010 OES-*	Average 19% growth 2000–2008 6,593 openings/year \$1,165–\$1,990/month	OJT, CC, TC, APP, LIC	Food & Beverage Service, Culinary Arts	CC: 5, 7, 13– 14, 18, 21–24 TC: 31–32, 34– 35 PCS:
Fry Cooks prepare food to order, such as hamburgers, eggs, and sandwiches in restaurants and cafes that emphasize fast service.	WOIS-7826 DOT-313.374-010 DOT-313.374-014 OES-*	Average 24% growth 2000–2008 790 openings/year \$1,165–\$1,610/month	OJT, HS, VOC, CC, TC, LIC	Culinary Arts	CC: 5, 7, 13, 15, 18, 21–24 TC: 31–32, 34– 35 PCS:
Hotel & Motel Desk Clerks greet and register guests, reserve and assign rooms, issue keys, sort mail, and provide information about hotel services.	WOIS-1458 DOT-238.367-038 OES-53808	Average 8% growth 2000–2008 157 openings/year \$1,165–\$1,579/month	HS, VOC, CC, TC	Hotel Management	CC: 11, 21, 23– 24, 30 TC: 34
Hotel & Motel Managers direct and coordinate the operation of hotels, motels, lodging facilities, and restaurants, including housekeeping, food service, accounting, and guest room service.	WOIS-1132 DOT-187.117-038 OES-15026	Faster than average 27% growth 2000–2008 859 openings/year \$1,165–\$5,000/month +bonuses	HS, VOC, CC, TC, COL	Hotel, Motel Management	CC: 11, 13, 21, 23–24, 30 TC: 34 U: 47–50
Restaurant Managers are responsible for the general operation of restaurants. They coordinate the entire business operation for sanitary, efficient, and courteous service.	WOIS-1131 DOT-187.167-106 OES-15026	Average 27% growth 2000–2008 859 openings/year \$1,165–\$5,389/month	OJT, HS, CC, TC, COL,	Restaurant Management	CC: 4–5, 7 13, 18, 21–24, 30 TC: 33 U: 47–50 PCS:
Room Cleaners do the daily cleaning of rooms in hotels, motels, and health facilities.	WOIS-3454 DOT-323.687-014 OES-*	Slower than average 6% growth 2000–2008 \$1,165–\$1,800/month	OJT		No approved/ accredited training programs in Washington.

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Ticket Agents gather, compile, record, and verify passenger travel information to write airline, bus, ship, or train tickets. Some also assist passengers and check tickets at the entrance gate when passengers are boarding or departing.	WOIS-1425 DOT-238.367-026 OES-53805	Declining 2% decline 2000–2008 112 openings/year \$1,165–\$2,960/month	VOC, CC, TC	Travel & Tourism	CC: 7, 11, 30 TC: 32–33
Tour Guides escort groups of people and explain points of interest, usually following a special route.	WOIS-8489 DOT-353.167-010 OES-68017	Average 7% growth 2000–2008 15 openings/year \$1,165–\$2,311/month	LIC		No approved/ accredited training programs in Washington.
Travel Agents help people make plans for vacations and other trips by arranging transportation, lodging, and activities. Agents use travel manuals, four-package brochures, lodging, airlines, and other carrier-rate schedules to help clients obtain the most convenient and economical means of travel. They rely heavily on computers. An ability to communicate and a desire to work with people is essential. This job can be quite stressful during peak seasons.	WOIS-1424 DOT-252.152-010 OES-*	Average 16% growth 2000–2008 228 openings/year \$1,165–\$3,000/month	OJT, HS, VOC, CC	Travel & Tourism	CC: 7, 11, 30 TC: 32–33 PCS:
Waiters & Waitresses take orders, serve food and beverages, total checks, and sometimes take payments. Duties vary with the type of service provided by the restaurant.	WOIS-7854 DOT-311.477-030 OES-*	Average 15% growth 2000–2008 3,206 openings/year \$1,165/month+tips	OJT, CC	Dining Room Service	CC: 13

Human Services

Instructional programs and occupations dealing with promoting and providing individual, family, and community relations and wellness , including family and work issues, religious services, care for the elderly, and social work.

- Family & Consumer Sciences
- Religious Services
- Social Services

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Athletic Trainers help athletes become and stay physically fit so they can compete in sports. Trainers work with coaches and physicians to prevent, evaluate, treat, and rehabilitate athletic injuries.	WOIS-8158 DOT-153.224-010 OES-34058	Average 15% growth 2000–2008 \$1,500–\$8,000/month	COL	Physical Education, Physical Therapy	U: 36–42, 44–46, 51 PU: 55, 59, 61, 64–65, 67
Caseworkers provide a multitude of services to help people solve their individual and family problems. Caseworkers specialize in such fields as child welfare, family services, medical, psychiatric and public assistance.	WOIS-8418 DOT-195.107-010	Not surveyed \$1,165–\$3,540	COL, GRAD	Social & Human Services, Corrections	U: 36–51 PU: 56, 59–60, 62, 65
Child Care Workers supervise and care for children in preschool or day care programs. They are responsible for the care, safety, and conduct of the children in their charge.	WOIS-8449 DOT-359.677-018 DOT-359.677-018 OES-68038	Faster than average 26% growth 2000–2008 1,173 openings/year \$1,165–\$2,440/month	OJT, HS, VOC, CC, TC	Child Care Provider, Early Childhood Education Para-professional	CC: 1, 4–6, 8, 10–18, 20–22, 25, 27–30 TC: 31, 33–35 PU: 56
Clergy conduct religious services and perform duties related to beliefs and practices of their faith. An ability to speak and write effectively and organize and supervise others is needed. Religious work can be very stressful. Most clergy are on call 24 hours a day, visit the sick in hospitals, counsel their members, and perform marriage and funeral ceremonies.	WOIS-8436 DOT-120.107-010 OES-*	Average 16% growth 2000–2008 153 openings/year \$1,500–\$3,510/month	OJT, COL, GRAD	Religion & Theology, Ministry	PU: 55, 58, 62–65

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Domestic Service Workers assume household responsibilities such as cleaning, cooking, laundering, and child care for individuals.	WOIS-3456 DOT-301.474-010 DOT-301.137-010 DOT-301.687-014 OES-*	Slower than average 2% growth 2000–2008 568 openings/year \$1,165–\$1,400/month			No approved/ accredited training programs in Washington.
Fitness Instructors demonstrate exercises and use of equipment to help patrons control weight and achieve physical fitness.	WOIS-8642 DOT-359.567-010 DOT-153.227-014	Not surveyed \$1,300–\$3,060/month	OJT, HS, CC, TC, COL	Health/Fitness Technology	CC: 9, 25 TC: 34–35 PU: 55, 59
Fund-Raising Administrators plan, manage, and carry out programs to raise money for charities, institutions, and various nonprofit organizations.	WOIS-1197 DOT-165.117-010 DOT-165.117-014	Not surveyed \$2,080–\$7,698/month	COL	Business Administration, Marketing, Public Relations, Communications, Speech Communication	U: 36–51 PU: 52–56, 58–65, 67
Funeral Directors & Embalmers arrange and conduct funeral and burial services and prepare and arrange bodies for burial.	WOIS-8632 DOT-338.371-014 DOT-187.167-030 OES-*	Declining 1% decline 2000–2008 15 openings/year \$1,165–\$4,567/month	LIC, CC, APP	Funeral Service Education	A regional program is offered at Mt. Hood Community College near Portland, Oregon.
Interpreters & Translators convert words from one language to another. Interpreters translate spoken language. Translators work with written material.	WOIS-2184 DOT-137.267-010 DOT-137.267-018	Not surveyed Earnings vary greatly	CC, COL, APP, GRAD	Foreign Language	CC: 1 U: 36–51 PU: 55–56, 59, 61–67
Janitors keep rooms, halls, offices, lobbies, and lounges clean and attractive and provide necessary supplies to the occupants.	WOIS-3455 DOT-382.664-010 OES-*	Average 11% growth 2000–2008 1,351 openings/year \$1,165–\$2,500/month	OJT, CC, TC	Custodial Services, Building Maintenance Technology	CC: 22–23 TC: 31 PCS:
Mental Health Counselors help individuals, couples, and families to deal with emotional and interpersonal problems. Hypnotherapists use hypnosis to change behavior patterns or increase motivation in clients.	WOIS-8411 DOT-045.107–050 DOT-045.107-054 OES-27302	Faster than average 29% growth 2000–2008 413 openings/year \$1,900–\$4,250/month	COL, GRAD, LIC	Clinical Psychology, Sociology	U: 36–51 PU: 52–53, 55–56, 58–67

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Parole & Probation Officers work with legal offenders to help them readjust to society.	WOIS-8422 DOT-195.107-046	Not surveyed \$1,500–\$3,300/month	COL, GRAD	Criminal Science, Sociology	U: 36–51 PU: 53, 55–56, 59–67
Professional Athletes participate in competitive athletic events to earn their living. They may compete in soccer, volleyball, boxing, bowling, auto racing, hockey, football, baseball, basketball, golf, tennis, and sailing.	WOIS-9878 DOT-153.341-010 OES-34058	Average 15% growth 2000–2008 98 openings/year Earnings vary greatly			No approved/ accredited training programs in Washington.
Recreation Attendants schedule use of recreation facilities, such as golf courses, racquet courts, and softball diamonds and provide services to those who use the facilities.	WOIS-8487 DOT-195.367-030 OES-*	Average 19% growth 2000–2008 867 openings/year \$1,165–\$2,379/month	OJT, HS, CC	Recreation	CC: 1, 24
Recreation Leaders plan, organize, and direct leisure activities for the public or individuals with specific needs. Activities may include arts and crafts, athletics, and dancing.	WOIS-8486 DOT-195.227-014 OES-*	Faster than average 28% growth 2000–2008 758 openings/year \$1,690–\$3,320	OJT, CC, COL	Physical Education Recreation & Park Management, Recreation Technology	CC: 1, 24, 44, 51 PU: 55, 59, 61, 64–65, 67
Residential Counselors supervise, guide, and provide instruction in daily living skills to residents in institutional settings.	WOIS-8423 DOT-187.167-186 OES-27307	Faster than average 29% growth 2000–2008 292 openings/year \$1,165–\$2,540/month	TC, CC	Social Science, Social & Human Services	CC: 6–7, 18, 20, 25, 26, 29 TC: 33 U: 36–51 PU: 56, 59–60, 62, 65
Sign Language Interpreters link the words of the hearing and the nonhearing by interpreting spoken sign language communication.	WOIS-8446 DOT-137.267-014	Not surveyed \$1,390–\$3,470/month	OJT, CC	Sign Language Interpreter	CC: 18, 22, 25
Social Program Planners analyze community needs and design programs to lessen social problems. This occupation includes research, program evaluation, and policy and program planning.	WOIS-2164 DOT-188.167-010	Not surveyed \$1,500–\$5,070/month	COL, GRAD	Social Science, Social & Human Services	U: 36–51 PU: 56, 59–60, 62, 65

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Social Service Aides provide much of the leg work necessary to implement social service, employment and training, and community health programs.	WOIS-8428 DOT-195.367-034 OES-*	Faster than average 47% growth 2000–2008 642 openings/year \$1,165–\$2,310/month	OJT, CC	Social Science	CC: 6–7, 9, 16–18, 20–21, 25–26
Social Services Specialists provide professional assistance in program implementation to help people overcome financial, personal, employment, health, or family problems.	WOIS-8424 DOT-195.167-010 OES-27305	Faster than average 23% growth 2000–2008 \$1,800–\$3,410/month	CC, COL, GRAD, LIC	Social Science, Social & Human Services	CC: 6–7, 18, 20–21, 25–26 U: 36–51 PU: 56–57, 59–60, 62, 65

Information Technology

Instructional programs and occupations dealing with the design, programming, development, management, maintenance, and operation of computer, information, communication, and technology networks, including related hardware and software.

- Business Information Systems
- Computer Systems Analysis & Engineering Services
- Hardware Support Services
- Programming & Software Development

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Computer Operators monitor and operate computer consoles and peripheral equipment such as printers and disk drives. They assist other computer specialists in testing computer programs.	WOIS-2356 DOT-213.362-010 OES-*	Declining 25% decline 2000–2008 68 openings/year \$1,213–\$3,250/month	OJT, HS, VOC, CC, TC	Computer Support Specialist	CC: 1, 5, 7–8, 10–11, 13, 15–17, 20, 22, 25–27, 30 TC: 32–34 PCS:
Computer Programmers write step-by-step instructions for computers. These instructions or programs tell the computer exactly what it must do to solve a problem or perform a job. Programmers may work long hours alone or in teams on big projects.	WOIS-2354 DOT-030.162-010 OES-*	Slower than average 2% growth 2000–2008 449 openings/year \$1,900–\$7,013/month	OJT, HS, VOC, CC, TC, COL	Computer Science, Computer Programming	CC: 1–2, 4, 6–8, 10–14, 16–18, 20, 26, 28–30 TC: 31–35 U: 36–51 PU: 53–56, 59–65, 67 PCS:
Computer Service Technicians install, maintain, and repair computers and computer-related machines such as magnetic tape readers, printers, and keypunch machines.	WOIS-3165 DOT-828.261-022 OES-*	Faster than average 32% growth 2000–2008 86 openings/year \$1,220–\$4,006/month	OJT, HS, CC, TC	Computer Service Technology	CC: 4–5, 7, 9–11, 13, 15, 18, 22, 24, 26–27 TC: 31–33, 35
Database Designers & Administrators design, code, and maintain computer databases.	WOIS-2364 DOT-039.162-010 DOT-039.162-014 OES-25103	Faster than average 53% growth 2000–2008 \$2,400–\$6,020/month 112 openings/year	CC, COL, GRAD	Database Administration, Computer Science, Business Computer Science	CC: 5, 8, 10, 12, 16–17, 21–22, 25, 30 U: 36–51 PU: 53, 56, 59–67
Information Systems Managers direct the operations of electronic information systems for business and government.	WOIS-1172 DOT-169.167-082 DOT-169.167-030	Not surveyed \$3,670–\$7,500/month	COL, GRAD	Information Science, Business Administration	U: 42, 44–51 PU: 52–53, 61–62, 65

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Microcomputer Support Specialists help computer system users get the most benefit from their equipment by providing technical support and training.	WOIS-2358 DOT-039.264-010 OES-25104	Faster than average 52% growth 2000–2008 345 openings/year \$1,500–\$3,670/month	CC, TC	Computer Support Specialist	CC: 1, 3, 5, 7–17, 20, 22, 24–28, 30 TC: 32, 34 PCS:
Network Administrators set up, operate, and maintain computer networks.	WOIS-2362 DOT-031.262-014	Not surveyed \$1,730–\$4,640/month	CC, COL	Computer Network Technology	CC: 1, 4–5, 9–17, 29–24, 26, 28 TC: 31–32 PU: 53 PCS:
Systems Analysts examine business procedures or problems and develop approaches or solutions that can be achieved with computers. Analysts give their solutions to programmers for translating into coded instructions for computers.	WOIS-2353 DOT-030.167-014 OES-25102	Faster than average 52% growth 2000–2008 1,285 openings/year \$2,080–\$4,784/month	COL, GRAD	Computer Science	U: 36–51 PU: 53–56, 59–65, 67 PCS:
Web Specialists design, operate, and maintain websites on the internet and private networks called intranets.	WOIS-2361 OES-25199	Faster than average 120% growth 2000–2008 572 openings/year \$3,040–\$4,950/month	CC, TC, COL	Web/Internet Technology, Computer Science	CC: 1, 3, 5, 7, 10, 13, 20, 23–25 TC: 32–33 U: 36–51 PU: 55, 56, 59–65, 67

Law & Public Safety

Instructional programs and occupations dealing with police work, the law and legal services, the judicial (court) system, the study and detention of criminals, and fire protection.

- Criminal Justice & Corrections
- Fire Protection
- Law & Legal Services

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Correctional Officers monitor inmates in prisons and jails by observing them and enforcing rules. They inspect surroundings to ensure security and safety of prisoners.	WOIS-9419 DOT-372.667-018 OES-63017	Faster than average 35% growth 2000–2008 299 openings/year \$1,750–\$3,200/month	OJT, HS, VOC, CC, COL	Corrections, Law Enforcement & Criminal Justice	CC: 1, 4–6, 8–10, 12, 14–17, 20–22, 24, 26–27, 29–30 U: 36–42, 47–50 PU: 55–56, 62–63 PCS:
Fire Fighters control and put out fires, protect life and property, and maintain equipment. They may work as volunteers or employees of cities, townships, or industrial plants.	WOIS-9426 DOT-373.364-010 OES-*	Average 12% growth 2000–2008 388 openings/year \$2,780–\$4,370/month	OJT, HS, CC, TC, APP	Fire Science, Fire Command Administration	CC: 1, 6–7, 12, 14–17, 21–22, 24, 27–28, 38 TC: 31
Law Enforcement Officers are responsible for law enforcement, protecting lives and property, and maintaining public order.	WOIS-9414 DOT-375.263-014 DOT-375.263-018 DOT-375.267-014 OES-*	Average 18% growth 2000–2008 623 openings/year \$2,040–\$4,600/month	OJT, HS, VOC, CC, COL, LIC	Law Enforcement & Criminal Justice	CC: 1, 4–6, 8–12, 14–17, 20–21, 24, 26–27, 29–30 U: 36–42, 47–50 PU: 55, 60, 62–63 PCS:
Lawyers research and interpret law to advise clients in legal matters concerning their rights and responsibilities. They handle settlement of legal problems in and out of court.	WOIS-8432 DOT-110.107-010 OES-*	Average 15% growth 2000–2008 520 openings/year \$2,259–\$8,902/month	GRAD, LIC	Law	U: 44–46 PU: 55, 62–63
Legal Secretaries perform a variety of clerical duties in the preparation of legal papers and correspondence.	WOIS-1444 DOT-201.362-010 OES-55102	Average 11% growth 2000–2008 132 openings/year \$1,500–\$3,390/month	OJT, HS, CC, TC, APP	Legal Secretary Program	CC: 4–14, 16–17, 22, 24, 27–30 TC: 31–35 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Paralegals apply knowledge of law and legal procedures to assist lawyers, clients, and courts. They are also called paralegal assistants, legal investigators, or legal aides.	WOIS-8433 DOT-119.267-026 OES-*	Faster than average 34% growth 2000–2008 88 openings/year \$1,600–\$3,640/month	HS, VOC, CC, COL	Paralegal Technology	CC: 5–7, 11, 16–17, 21–22, 24, 29 U: 36 PU: 53 PCS:
Security Guards protect property against fire, theft, vandalism, and illegal entry. They guard buildings and grounds, merchandise, and other valuable property.	WOIS-9476 DOT-372.667-034 OES-*	Average 16% growth 2000–2008 961 openings/year \$1,165–\$2,250/month	OJT, VOC, CC, LIC	Security Training, Criminal Justice & Law Enforcement	CC: 1, 4–5, 8–12, 14–17, 21–21, 24, 26–28, 30 PCS:
Shorthand Reporters record and preserve official legal testimony using manual or machine shorthand. A growing number use computer-aided transcription in which a computer directly translates the shorthand notes into English.	WOIS-1415 DOT-202.362-010 OES-55302	Average 7% growth 2000–2008 53 openings/year \$1,924–\$4,000/month	VOC, CC, TC, LIC	Court Reporter	CC: 10 TC: 31 PCS:
Store Detectives protect the property of business establishments by detecting thievery, shoplifting, or dishonesty among patrons or employees.	WOIS-9477 DOT-376.367-014 OES-63035	Average 18% growth 2000–2008 24 openings/year \$1,165–\$2,591/month	OJT, APP, LIC	Criminal Justice & Law Enforcement	CC: 1, 4–6, 8–12, 14–17, 20–21, 24–25, 27, 29–30

Manufacturing

Instructional programs and occupations dealing with the process of creating intermediate and finished products beginning with raw materials; includes managing, planning, and performing the production of various items by operating machinery, as well as industrial support activities such as production planning and control and maintenance.

- Industrial Management
- Industrial Technology & Maintenance
- Precision Metal & Machining
- Production Operations

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Bakers mix dough following recipes and bake breads, pastries, and other bakery goods.	WOIS-4324 DOT-562.381-010 OES-*	Average 20% growth 2000–2008 \$1,165–\$3,010/month	OJT, HS, VOC, CC, TC, APP	Food Service, Culinary Arts, Commercial Baking	CC: 5, 18, 23–24 TC: 32, 34–35
Beverage Workers tend machines or work on production lines filling, washing, capping, or packaging bottles and/or canned beverages.	WOIS-4347 DOT-529.685-026 DOT-920.685-026 OES-*	Slower than average 6% growth 2000–2008 12 openings/year \$1,165–\$2,610/month	OJT		No approved/ accredited training programs in Washington.
Blacksmiths & Forge Shop Workers make metal exceptionally strong objects by heating and shaping metals. This technique (called forging) is used to make tool and machine parts. All use a special furnace known as a forge. Farriers (or horse-shoers) use small forges, hand tools, and anvils. Modern forge shops use heavy power equipment and precision die blocks to work more rapidly and accurately.	WOIS-5488 DOT-418.381-010 DOT-610.381-010 DOT-611.482-010 OES-91317	Slower than average 3% growth 2000–2008 6 openings/year \$2,260–\$5,830/month	OJT, CC, APP	Blacksmith, Farrier	CC: 27
Boat Builders build pleasure boats or other water craft. Some use fiberglass materials and/or metal, including aluminum and steel. Others specialize in building wooden boats, using tools and techniques similar to those used in carpentry.	WOIS-5956 DOT-860.361-010	Not Surveyed \$1,165–\$3,470/month	OJT, VOC, CC, TC, APP	Marine Carpentry, Boat Building	CC: 18 TC: 31 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Boilermakers build, assemble, install, test, and repair metal structures such as boilers, tanks, furnaces, antipollution systems, and pressure vessels.	WOIS-5483 DOT-805.261-014 OES-89135	Declining 5% decline 2000–2008 7 openings/year \$1,566–\$4,000/month	APP, LIC	Welding	Training is available through apprenticeship programs.
Bookbinders & Bindery Workers assemble, bind, and cover products such as books, magazines, and business forms.	WOIS-4774 DOT-977.381-010 DOT-653.685-010 OES-*	Average 14% growth 2000–2008 34 openings/year \$1,165–\$3,830/month	OJT, CC, TC, APP	Graphic Arts, Printing	CC: 5, 11, 18, 20–21, 25, 27 TC: 33
Cabinetmakers build, install, and repair cabinets, shelving, and fixtures for homes and businesses.	WOIS-4586 DOT-660.280-010 OES-*	Slower than average 5% growth 2000–2008 70 openings/year \$1,210–\$3,110/month	OJT, HS, CC, TC, APP	Carpentry, Cabinetmaking	CC: 9, 15, 18 TC: 31, 33
Cannery & Food Processing Workers sort and prepare fruit, vegetables, meat, seafood, and dairy products for canning, freezing, or shipment. The type of food varies geographically. Vegetables are processed around Walla Walla and Waitsburg, fruits in the Yakima Valley, and seafood in the Grays Harbor-Willapa Bay and Puget Sound areas.	WOIS-4348 DOT-529.686-014 DOT-920.687-134 OES-*	Average 12% growth 2000–2008 835 openings/year \$1,165–\$2,630/month	OJT		No approved/ accredited training programs in Washington.
Electronics Assemblers wire and assemble electronic part such as capacitors and transistors, into electrical products.	WOIS-5686 DOT-726.684-018 OES-*	Average 17% growth 2000–2008 405 openings/year \$1,165–\$2,432/month	OJT, HS, VOC, CC, TC	Electronics Technology	CC: 4–6, 10, 12–13, 15, 21–22 TC: 31–33, 35 PCS:
Expeditors ensure product delivery by a deadline. They must know product schedules, inventory, work loads, and material availability. They compile reports for production workers, confer with department supervisors to determine status of overdue material, and determine priority for orders.	WOIS-1185 DOT-221.367-042 OES-58008	Declining 4% decline 2000–2008 89 openings/year \$1,200–\$4,408/month	OJT, CC, TC, COL	Business Administration	CC: 1, 3, 5–11, 13–17, 20, 22, 24–27, 29–30 U: 36–51 PU: 53, 55–56, 58–65, 67
Fashion Designers create original designs for clothing and accessories.	WOIS-4442 DOT-142.061-018 OES-*	Not surveyed \$1,165–\$4,167+/month	CC, TC, COL	Apparel Design, Clothing/ Textiles	CC: 18 TC: 31 U: 36–41, 44–50 PU: 61

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Foundry Production Workers produce finished metal parts, known as castings, from patterns and molds.	WOIS-5426 DOT-519.687-022 OES-*	Average 13% growth 2000–2008 19 openings/year \$1,165–\$3,300/month	OJT, APP	Machine Shop	Training is available through apprenticeship programs.
Machine Tool Operators use one or more machine shop power tools that shape metal or plastic to precise dimensions. Some operate computer-controlled machines that use programmed instructions to shape the pieces being made.	WOIS-5472 DOT-601.280-054 OES-*	Average 6% growth 2000–2008 408 openings/year \$1,165–\$3,310/month	OJT, HS, CC, TC, APP	Machine Technology	CC: 5–6, 9–10, 12, 20, 23–24, 27 TC: 31–35 PCS:
Machinists set up, operate, and service machine tools. Machine tools are large, power-driven machines that drill, shear, grind, or shape metal.	WOIS-5464 DOT-600.280-022 OES-89108	Slower than average 4% growth 2000–2008 238 openings/year \$1,220–\$3,800/month	OJT, HS, CC, TC, APP	Machinist or Machine Tool Technology	CC: 5–6, 9–10, 12, 20, 23–24, 27 TC: 31–35 PCS: 225
Meat Cutters prepare meat, fish, and poultry for whole-sale and retail trade. Some meat cutters perform specialized work in meat packing plants.	WOIS-4326 DOT-316.681-010 OES-*	Average 9% growth 2000–2008 258 openings/year \$1,260–\$3,000/month	OJT, HS, APP	Meat Cutting	Training is available through apprenticeship programs.
Metal Working Pattern Makers build patterns to make molds in which metal castings are formed.	WOIS-5422 DOT-600.280-050 OES-*	Declining 1% decline 2000–2008 11 openings/year \$1,165–\$3,780/month	OJT, APP		Training is available through apprenticeship programs.
Millwrights install machinery and equipment in an industrial establishment according to layout plans, blueprints, and other drawings.	WOIS-3142 DOT-638.281-018 OES-*	Average 8% growth 2000–2008 510 openings/year \$1,910–\$4,020/month	OJT, HS, APP	Millwright	Training is available through apprenticeship programs.
Molders make nonpermanent molds for the casting of metals. Jobs vary because of different molding processes used, such as sand, plaster, shell, and wax molding.	WOIS-5424 DOT-518.361-010 OES-*	Average 10% growth 2000–2008 19 openings/year \$1,165–\$2,550/month	VOC, APP		Training is available through apprenticeship programs.
Packers & Wrappers package various products by hand or by machine to be shipped or marketed.	WOIS-7126 DOT-920.587-018 DOT-920.685-078 OES-*	Faster than average 22% growth 2000–2008 1,530 openings/year \$1,165–\$2,730/month	OJT		No approved/ accredited training programs in Washington.

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Production Assemblers assemble manufactured products such as automobiles, appliances, electronic products, and machines and their related parts. They may be responsible for one job or a variety of operations.	WOIS-5966 DOT-706.687-010 OES-*	Average 11% growth 2000–2008 1,175 openings/year \$1,165–\$2,260/month	OJT, HS		No accredited training programs available in Washington.
Production Painters & Finishers apply paint, varnish, and other finishes to machines and other manufactured products using spray guns, brushes, and other painting equipment.	WOIS-5926 DOT-740.684-022 DOT-741.684-026 OES-*	Average 14% growth 2000–2008 205 openings/year \$1,165–\$3,140/month	OJT, APP		Training is available through apprenticeship programs.
Production Superintendents ensure their company's products or services are made efficiently and produced on time.	WOIS-1154 DOT-183.117-014 OES-15014 OES-81008	Slower than average 5% growth 2000–2008 462 openings/year \$1,750–\$6,692/month	COL, GRAD, APP	Supervision, Industrial Technology	U: 36–51 PU: 55, 61, 67
Pulp & Paper Workers tend machines that produce pulp, newsprint, fine papers, tissue, paperboard containers, and boxes.	WOIS-4574 DOT-539.685-030 DOT-534.662-010 OES-92914	Declining 8% decline 2000–2008 32 openings/year \$1,390–\$4,290/month	OJT, CC	Pulp & Paper Technology	CC: 12 U: 44–46
Quality Control Inspectors examine products at various stages of development to ensure that standards are met and maintained.	WOIS-2672 DOT-012.261-014 OES-*	Declining 3% decline 2000–2008 224 openings/year \$1,165–\$4,290/month	OJT, HS, CC, TC, APP	Quality Control Technology, Food Service, Nondestructive Testing	CC: 16–17 U: 47–50
Rubber & Plastics Fabricators operate machines that cut out rubber and plastic items according to certain designs or templates. Examples of items produced are beach balls, rubber mats, plastic bags, and pads.	WOIS-5924 DOT-559.685-158 DOT-754.684-042 OES-*	Average 11% growth 2000–2008 \$1,165–\$2,880/month 366 openings/year	OJT, HS, CC	Plastics Technology	CC: 11

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Sawmill & Plywood Laborers Green Chain Offbearers pull lumber or veneer from a moving conveyor onto piles or carts. Veneer Drier Feeders lift sheets of veneer onto a conveyor that takes it through the drier. Chippers and Hog Tenders tend machines that reduce waste to wood chips.	OIS-4554 DOT-667.687-018 OES-*	No growth 137 openings/year \$1,560–\$3,190/month	OJT		No approved/ accredited training programs in Washington.
Sewing Machine Operators operate single or multiple needle sewing machines or ultrasonic seaming machines to join, reinforce, or decorate products such as garments, upholstery, canvas goods, or textiles.	WOIS-4448 DOT-787.682-046 OES-*	Declining 5% decline 2000–2008 92 openings/year \$1,165–\$2,040/month	OJT, TC, CC, APP	Power Sewing, Apparel Construction	CC: 18 TC: 31
Textile Machine Operators tend machines that run cloth and yarn through chemical and physical treatments to prepare the material for manufacturing or marketing.	WOIS-4424 DOT-582.686-030 OES-*	Declining 11% decline 2000–2008 10 openings/year \$1,165–\$2,250/month	OJT, HS CC, TC		No approved/ accredited training programs in Washington.
Tool-and-Die-Makers make or repair tools, dies, and special guiding devices used to build machines that mass-produce products ranging from furniture to airplane parts.	WOIS-5462 DOT-601.260-010 OES-89102	Slower than average 2% growth 2000–2008 16 openings/year \$1,570–\$4,250/month	OJT, HS, CC, TC, APP	Machinist or Machine Tool Technology	CC: 5–6, 9–10, 12, 20, 23–24, 27 TC: 31–35 PCS:
Welders permanently bond together metal parts using heat and/or pressure. They weld broken parts to manufactured or repaired products. Most welders are required to read blueprints and shop drawings, do layout and fabrication, and are usually required to have some mechanical skills and ability to use tools such as grinders, shears, drills, cutting torches, radiograph torches, jigs, and fixtures. They may be required to use different welding processes such as shielded arc, MIG, or TIG.	WOIS-5492 DOT-811.684-014 DOT-819.384-010 OES-*	Average 12% growth 2000–2008 376 openings/year \$1,390–\$3,470/month	OJT, HS, CC, TC, APP, LIC	Welding	CC: 2, 4–6, 8–10, 12, 14–115, 21, 24, 27–28 TC: 31–35

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Woodworking Machine Operators work from blueprints to set up and operate a variety of woodworking machines to surface, cut, shape, and join parts of wood products according to specifications. Depending on the size of the factory, they may specialize in only one machine such as a router, machine sander, lathe, or, boring machine.	WOIS-4582 DOT-669.380-014 OES-*	Slower than average 2% growth 2000–2008 81 openings/year \$1,165–\$2,350/month	OJT, HS, CC, TC, APP	Carpentry & Cabinet Making	CC: 9, 15, 18 TC: 31, 33

Retail/Wholesale Sales & Services

Instructional programs and occupations dealing with marketing, advertising, or otherwise promoting and selling merchandise; includes managing retail establishments, making merchandise-specific repair, and providing personal services (e.g., cosmetics, hairstyling, funeral services) to consumers.

- Fashion Merchandising & Design
- Marketing & Public Relations
- Personal Services
- Precision Repair

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Apartment House Managers live in apartment complexes and assist building owners by giving information to residents and prospective residents and by keeping the property neat and in good repair.	WOIS-1133 DOT-187.167-018 OES-15011	Average 15% growth 2000–2008 202 openings/year \$1,165–\$1,733/month	CC, COL, APP, OJT	Business, Administration	CC: 1, 3, 5–11, 13–17, 20, 22, 24–27, 29–30 U: 36–51 PU: 53, 55–56, 58 PCS:
Appliance Repairers install, service, and repair gas and electrical appliances such as refrigerators, dishwashers, ranges, washing machines, and hot water heaters.	WOIS-3169 DOT-723.584-010 OES-*	Average 17% growth 2000–2008 66 openings/year \$1,390–\$2,670/month	OJT, HS, TC, APP	Appliance Repair	TC: 31–32, 35
Appraisers evaluate items such as land, homes, commercial and industrial properties, art objects, or machinery to determine value for purchase, tax, investment, insurance, loan, or litigation purposes.	WOIS-1634 DOT-191.287-010 OES-*	Average 10% growth 2000–2008 \$1,200–\$5,190/month	OJT, CC, TC, COL, LIC	Business Administra- tion, Real Estate, Art History, Insurance	CC: 1, 5–11, 13–17, 20, 22, 24–27, 29–30 PU: 52–53, 55– 56, 59–67
Automobile Parts Clerks receive, store, and sell replacement parts, tools, equipment, accessories, and supplies in auto dealerships, repair shops, or parts stores.	WOIS-7486 DOT-279.357-062 OES-49014	Average 12% growth 2000–2008 364 openings/year \$1,165–\$3,371/month	OJT, HS, TC, APP	Parts Merchandising	TC: 31, 33, 35
Automobile Salespeople work at automobile dealerships. They sell new and used cars and trucks, compile information on various models, and establish credit terms for customers.	WOIS-7418 DOT-273.353-010	Not surveyed \$1,165–\$5,000/month	OJT, HS, CC, TC	Marketing & Sales Training	CC: 1, 4–5, 7, 11, 16–17, 20, 23– 25, 30 TC: 33

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Automotive Service Technicians greet customers and service cars, trucks, and buses with fuel, oil, and accessories. They may lubricate vehicles, change motor oil, install antifreeze, and repair/replace tires and accessories.	WOIS-3124 DOT-915.467-010 OES-*	Average 12% growth 2000–2008 303 openings/year \$1,165–\$2,110/month	OJT	Automotive Mechanic	No approved/ accredited training programs in Washington.
Barbers cut and style hair, shave and trim beards, and provide other hair care services according to customer requests or current styles.	WOIS-8622 DOT-330.371-010 OES-68002	Slower than average 5% growth 2000–2008 46 openings/year \$1,250–\$2,783/month	HS, VOC, CC, TC, APP, LIC	Barbering	CC: 8, 14 TC: 31, 35 PCS:
Business Services Salespeople sell various types of services such as credit information, accounting services, printing services, and media advertising.	WOIS-7422 DOT-251.357-0101 OES-43017	Average 18% growth 2000–2008 26 openings/year \$1,165–\$3,766+/month	TC, CC, COL, APP	Sales & Marketing	CC: 1, 4–5, 7, 11, 16–17, 20, 23–25, 30 TC: 33 U: 42, 44–46, 51 PU: 53, 62, 65
Buyers & Purchasing Agents buy machinery, equipment, tools, raw material parts, services, and supplies necessary for the operation of an individual establishment, public utility, or government unit.	WOIS-1184 DOT-162.157-018 OES-*	Slower than average 5% growth 2000–2008 542 openings/year \$1,295–\$4,092/month	HS, CC, COL	Purchasing Management, Business Administration, Marketing	CC: 1, 4–11, 13–17, 20, 22–27, 29, 35 U: 36–51 PU: 53, 55–56, 58–65, 67
Cashiers are employed by a variety of businesses to handle payments from customers. Most cashiers receive money, make change, fill out charge forms, and give receipts.	WOIS-1642 DOT-211.362-010 OES-49023	Average 14% growth 2000–2008 2,556 openings/year \$1,165–\$2,381/month	OJT, HS, CC, TC, APP	Cashier-Checker,	CC: 10 TC: 31, 33
Cosmetologists perform beauty services, such as shampooing, cutting, setting, styling, and straightening hair according to the customer's request or current styles.	WOIS-8624 DOT-332.271-010 OES-*	Average 8% growth 2000–2008 690 openings/year \$1,165–\$2,500/month	HS, VOC, CC, TC, LIC	Cosmetology	CC: 8, 14, 18, 20, 23–24, 27 TC: 31, 33–35 PCS:
Display Workers (also called Visual Merchandisers) create eye-catching displays to attract the customer's attention and persuade them to buy merchandise.	WOIS-9834 DOT-298.081-010 OES 34044	Average 10% growth 2000–2008 41 openings/year \$1,127–\$2,100/month	CC, COL	Visual Merchandising, Fashion Merchandising	CC: 8, 16–17, 20, 25 U: 36–41 PU: 61

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Door-to-Door Salespeople sell merchandise or services by going door-to-door or by attending house parties.	WOIS-7444 DOT-291.357-010 OES-49026	Average 11% growth 2000–2008 210 openings/year Earnings vary	OJT, HS	Sales Training	No approved/ accredited training programs in Washington
Equipment Repairers repair and service nonelectrical equipment such as musical instruments, cameras, and bicycles, using specialized power tools and hand tools.	WOIS-3189 DOT-730.361-010 OES-*	Average 10% growth 2000–2008 46 openings/year \$1,165–\$3,800/month	OJT, HS, CC, TC, APP	Equipment Repair, Musical Instrument Repair	TC: 35 PCS:
Farm Sales & Service Representatives sell farm equipment and supplies.	WOIS-7425 DOT-272.357-014	Not surveyed \$1,165–\$2,500/month+ commission	CC, COL	Agricultural Business Management, Agrochemical Business	CC: 6, 24, 27–28 U: 47–50
Fashion Merchandisers promote clothing and accessories for sale by wholesale and retail business outlets or manufacturers. (This occupation is very broad and describes a variety of occupations.)	WOIS-7413 DOT-185.157-010	Not surveyed \$1,165–\$2,500+/month	OJT, HS, CC, COL	Retail & Wholesale Sales, Clothing & Textiles, Fashion Merchandising	CC: 7, 16–17, 20, 25 U: 36, 44–50 PU: 61 PCS:
Floral Designers prepare floral arrangements for a variety of occasions using flowers, greenery, and artificial materials.	WOIS-4146 DOT-142.081-010	Not surveyed \$1,165–\$1,750/month	OJT, CC, TC, VOC	Floriculture & Nursery Management, Ornamental Horticulture	CC: 5, 23–24 TC: 33–34 PCS:
Grocery Checkers handle money received from food store customers. They operate cash registers and optical character readers and may put groceries in bags or boxes.	WOIS-1641 DOT-211.462-014	Average 14% growth 2000–2008 1,259 openings/year \$1,165–\$2,687/month	OJT, HS, VOC, CC, TC, APP	Cashier-Checker	CC: 9 TC: 31, 33
Hearing Instrument Repairers evaluate hearing for the purpose of fitting hearing aids and to assist the hearing of the hearing impaired.	WOIS-8129 DOT-276.354-010 DOT-719.381-014	Not surveyed \$1,650–\$3,000/month	CC, TC, LIC, APP	Hearing Instrument Specialist, Hearing Aid Technology	CC: 25 TC: 31
Laundry & Dry Cleaning Workers receive, clean, press, and deliver laundry and other articles.	WOIS-4464 DOT-362.382-014 DOT-361.684-014 OES-*	Average 12% growth 2000–2008 191 openings/year \$1,165–\$2,000/month	OJT		No approved/ accredited training programs in Washington.

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Models pose for artists and photographers or display merchandise by wearing, using, or posing with it. Some models must have a sense of body motion, be in good physical condition, and be able to work with people.	WOIS-7496 DOT-297.667-014	Not surveyed Earnings vary greatly	OJT, HS, VOC	Professional Modeling & Finishing	PCS:
Office Machine Repairers maintain and repair all types of equipment used in offices. They may service equipment on a regular basis or check and repair defective machines.	WOIS-3164 DOT-633.281-018 OES-85926	Average 12% growth 2000–2008 89 openings/year \$1,400–\$3,620/month	OJT, HS, TC, APP	Electrical & Electronics Equipment Installation & Repair	TC: 33, 35
Petroleum Processing Occupations deal with processing crude oil into gasoline, kerosene, fuel oil, lubricants, and other home and industrial products.	WOIS-5914 DOT-549.260.010 DOT-549.360-010 OES-*	Declining 11% decline 2000–2008 5 openings/year \$1,650–\$3,480/month	OJT, HS, APP		Training is available through apprenticeship programs.
Property Managers are in charge of leasing, renting, and maintaining property such as land and buildings.	WOIS-1135 DOT-186.167-046 OES-15011	Average 15% growth 2000–2008 202 openings/year \$1,350–\$6,073/month	CC, TC, COL, APP	Public/ Business Administration, Real Estate	CC: 1, 3, 5–11, 13–17, 20, 22, 25, 29–30 TC: 34 U: 36–51 PU: 553, 55–56, 58–65, 67
Radio & TV Service Technicians install, repair, and maintain electronic equipment such as radios, televisions, video cameras, and tape recorders.	WOIS-3168 DOT-720.281-018 OES-*	Declining 14% decline 2000–2008 11 openings/year \$1,165–\$3,170/month	OJT, HS, CC, TC, APP	Electrical & Electronics Equipment Installation & Repair	CC: 4, 7, 10, 12–13, 15, 21–22 TC: 31–33, 35 Training is available through apprenticeship programs.
Real Estate Agents rent, buy, and sell property for clients on a commission (percent of sales) basis. Agents work to match prospective buyers with property listed for sale. Some supplement their real estate income with a part-time job.	WOIS-7417 DOT-205.357-018 OES-*	Average 11% growth 2000–2008 \$420–\$4,166+	OJT, HS, CC, COL, TC, LIC	Real Estate	CC: 1, 13 TC: 34 U: 47–50 PCS:
Real Estate Secretaries assist real estate salespeople by doing background work for transactions in addition to clerical duties.	WOIS-1448 DOT-219.362-046 OES-53914	Average 8% growth 2000–2008 16 openings/year \$1,165–\$2,960/month	CC, TC, COL	Secretarial Science	CC: 1–30 TC: 31–35

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Retail Sales Clerks sell and package merchandise in a retail store. They make records of sales, stock, prepare inventory, and assist in reordering merchandise.	WOIS-7484 DOT-290.477-014 OES-49011	Average 14% growth 2000–2008 \$1,165–\$2,071/month 4,882 openings/year (some earn commissions)	OJT, VOC, CC, TC, APP	Sales Training, Marketing	CC: 1, 4–5, 7, 10–11, 16–17, 20, 23–25, 30 TC: 33
Route Salespeople (also called Delivery Drivers or Route Workers) sell and deliver goods to wholesale and retail customers on an established route.	WOIS-7434 DOT-292.353-010 OES-97117	Average 16% growth 2000–2008 399 openings/year \$1,165–\$3,000/month	OJT, CC, TC, APP	Sales Training, Marketing	CC: 1, 4, 7, 11, 16–17, 10, 23– 25, 30 TC: 33
Sales Managers (also called Retail Store Managers) plan some or all of the sales of a retail store activities or department. They plan advertising campaigns and sales promotions and hire, train, and evaluate sales workers. Sales managers also plan schedules and order merchandise.	WOIS-1162 DOT-163.167-018 OES-41002	Average 13% growth 2000–2008 1,806 openings/year \$1,910–\$9,520/month	OJT, HS, CC, TC, COL, GRAD	Marketing & Sales Management	CC: 1, 4–5, 7, 11, 16–17, 20, 23, 25, 30 TC: 33 U: 36, 51 PU: 53, 59, 62, 65 PCS:
Sales Representatives represent wholesale firms (firms selling large quantities to others for resale at higher prices) to retail, industrial, and commercial firms and institutions in assigned territories to sell goods and products. They must project a professional image to clients to win accounts. They also need to be organized, manage time well, and be excellent communicators both orally and in writing.	WOIS-7414 OES-*	Average 12% growth 2000–2008 1,565 openings/year \$1,565–\$6,282/month	OJT, HS, VOC, CC, COL, APP	Sales Training, Marketing	CC: 1, 4–5, 7, 10–11, 16–17, 20, 23–25, 30 TC: 33
Salespeople sell merchandise to customers using knowledge of the characteristics of their merchandise. People who work in stereo shops, fine furniture stores, house furnishings, etc., are examples of retail salespeople.	WOIS-7454 DOT-279.357-054 OES-*	Average 15% growth 2000–2008 653 openings/year \$1,165–\$3,470/month	OJT, HS, VOC, CC, TC, APP	Sales Training	CC: 1, 4–5, 7, 11, 16–17, 20, 23–25, 30 TC: 33 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Seamstresses & Tailors perform all sewing operations necessary to put together, alter, or repair clothing and other fabric articles.	WOIS-4446 DOT-785.261-014 DOT-785.361-010 OES-*	Slower than average 6% growth 2000–2008 55 openings/year \$1,165–\$2,395/month	CC, TC	Custom Apparel & Design & Construction	CC: 18 TC: 31
Stock Clerks receive, unpack, check, store, and issue supplies in stockrooms, warehouses, or storage yards. Some place orders and follow up on purchases made. In small operations, they are responsible for the entire function of the stockroom, from buying to distribution of supplies. In bigger operations, they usually specialize in one or two jobs.	WOIS-7118 DOT-222.387-058 OES-*	Slower than average 5% growth 2000–2008 424 openings/year \$1,165–\$2,360/month	OJT, CC, TC, APP	Transportation/ Logistics Management	CC: 11 TC: 35
Telephone Solicitors call potential customers on the telephone to sell them merchandise or services.	WOIS-7446 DOT-299.357-014 OES-49026	Average 11% growth 2000–2008 210 openings/year \$1,165–\$2,773/month	OJT, HS		No approved/ accredited training programs in Washington.
Upholsterers repair and rebuild upholstered furniture, automobile interiors, and vinyl tops. Some may work in factories and shops fashioning new upholstered furniture.	WOIS-4494 DOT-780.381-018 OES-89508	Slower than average 5% growth 2000–2008 15 openings/year \$1,165–\$2,940/month	OJT, TC, APP	Upholstery	TC: 31
Warehouse Workers receive, store, and ship materials and products that supply production operations. They also move finished products.	WOIS-7114 DOT-922.687-05 OES-*	Average 9% growth 2000–2008 218 openings/year \$1,165–\$3,380/month	OJT, HS	Transportation/ Logistics, Warehouse Management	CC: 11, 16–17 TC: 35

Scientific Research & Engineering

Instructional programs and occupations dealing with engineering, related technologies, scientific research, and application of scientific principles in all the natural sciences (e.g., biology, chemistry, earth science, physics) and social sciences (e.g., economics, sociology, geography, archeology, anthropology). This **does not** include specific medical, agricultural, or food sciences.

- Engineering
- Engineering Technologies
- Natural Sciences
- Social Sciences

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Aerospace Engineers design, construct, and test aircraft, spacecraft, missiles, and related component systems. They may be aeronautical engineers, mechanical engineers, or electrical engineers.	WOIS-2412 DOT-002.061-014 OES-22102	Declining 2% decline 2000–2008 43 openings/year \$2,500–\$8,670/month	COL, GRAD, LIC	Aerospace Engineering	U: 44–46
Aquatic Biologists study plants, animals, and other organisms living in water and the physical, chemical, geological, and climatic factors that affect them.	WOIS-2613 DOT-041.061-022	Not surveyed \$2,259–\$4,397/month	COL, GRAD	Biology	U: 44–46 PU: 61
Biological Scientists study all aspects of living matter. Their concerns include the origin, reproduction, growth, function, and structure of all forms of plant and animal life from large communities to microorganisms.	WOIS-2612 DOT-041.061.030 OES-*	Faster than average 24% growth 2000–2008 138 openings/year \$2,421–\$6,229/month	COL, GRAD	Biology	U: 36–51 PU: 55–56, 58–67
Chemical Engineers apply the principles and technology of chemistry, physics, mathematics, engineering, and economics to solve engineering and design problems. They analyze procedures, troubleshoot processing problems, do research to develop new processing methods, design equipment, and plan layouts of interrelated machinery.	WOIS-2418 DOT-008.061-018 OES-22114	Average 21% growth 2000–2008 54 openings/year \$3,170–\$7,108/month	COL, GRAD, LIC	Chemical Engineering	U: 44–50 PU: 61

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Chemists explore the composition and properties of matter and the laws that govern the combination of substances.	WOIS-2625 DOT-022.061-010 OES-24105	Faster than average 28% growth 2000–2008 90 openings/year \$1,978–\$6,675/month	COL, GRAD	Chemistry	U: 36–51 PU: 55–56, 59–67
Civil Engineers plan, design, and supervise construction and maintenance of many kinds of structures and facilities. They work on roads, railroads, airports, buildings, bridges, dams, and other structures.	WOIS-2421 DOT-005.061-014 OES-22121	Average 16% growth 2000–2008 349 openings/year \$2,300–\$6,020/month	COL, GRAD, LIC	Civil Engineering	U: 44–50 PU: 55, 60, 62, 65
Computer Engineers specialize in the design, manufacture, and application of computers.	WOIS-2423 DOT-033.167-010 OES-22127	Faster than average 92% growth 2000–2008 2,135 openings/year \$2,500–7,027/month	COL	Computer Engineering	U: 44–50 PU: 55, 59, 61 PCS:
Drafters make detailed drawings of buildings, products, and machinery from sketches and specifications made by engineers and architects. The drawings are used as working plans for engineering, manufacturing, and construction purposes. With new technology, most drafters use computer-aided design (CAD) systems.	WOIS-2484 DOT-005.281-010 DOT-002.261-010 DOT-007.281-010 DOT-003.281.014 DOT-005.281.014 OES-*	Slower than average 1% growth 2000–2008 197 openings/year \$1,387–\$3,615/month	VOC, CC, TC	Drafting	CC: 2, 4, 6, 8, 10–11, 13–14, 20, 22, 27, 30 TC: 31–35 PCS:
Earth Scientists study the history, composition, and characteristics of land, oceans, atmosphere, to increase knowledge of the earth and to solve problems.	WOIS-2631 OES-*	Average 21% growth 2000–2008 193 openings/year \$2,160–\$6,460/month	COL, GRAD	Geology	U: 36–51 PU: 59, 64, 66
Economists study the creation, exchange, and distribution of useful goods, services, and resources such as land, labor, and capital.	WOIS-2146 DOT-050.067-010 OES-27102	Average 18% growth 2000–2008 25 openings/year \$1,500–\$5,250/month	COL, GRAD	Economics	U: 36–51 PU: 55, 59, 61–66
Electrical & Electronics Engineers design, develop, produce, install, operate, and maintain electrical and electronic equipment and systems.	WOIS-2422 DOT-003.061-010 DOT-003.061-030 OES-22126	Average 15% growth 2000–2008 512 openings/year \$2,500–\$5,760/month	COL, GRAD, LIC	Electrical Engineering	U: 44–50 PU: 55, 59, 61– 62, 65

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Electronics Technicians construct, repair test, install, modify, or help design a variety of production or experimental electrical or electronic equipment. Most specialize in such areas as communication, medical equipment, and research laboratories. Many technicians work on product quality in manufacturing plants.	WOIS-5671 DOT-003.161-014 OES-*	Slower than average 4% growth 2000–2008 366 openings/year \$1,300–\$3,000/month	VOC, CC, TC, APP	Electrical & Electronics Technology	CC: 2, 5, 7, 10, 12–15, 18, 21–24 TC: 31–35 PU: 65 PCS:
Engineering Technicians assist engineers in the planning, research, and development of engineering projects or products. They assist engineers in areas, including architectural, civil, electrical, maintenance, safety, environmental, industrial production and manufacturing, quality control, computers, robotics, plastics, optics, marine, biological, and other fields.	WOIS-2451 DOT- See DOT Register for Specific Occupations OES-*	Slower than average 2% growth 2000–2008 337 openings/year \$1,500–\$3,880/month	HS, VOC, CC, COL, TC, APP	Engineering Technology	CC:, 2, 5–6, 8–13, 15–17, 20–21, 23–24, 27, 30 TC: 31–33, 35 U: 36, 40, 42 PU: 55, 65 PCS:
Environmental Engineers use a combination of skills to protect public health and solve environmental problems.	WOIS-2419 OES-22132	Average 14% growth 2000–2008 21 openings/year \$2,860–\$6,010/month	COL	Environmental Engineering, Civil Engineering	U: 44–50 PU: 55, 60, 62, 67
Environmental Health Specialists work for immediate and long-range protection from health and safety hazards by educating the public and enforcing laws and regulations.	WOIS-2682 DOT-079.117-018 OES-*	Average 11% growth 2000–2008 111 openings/year \$1,700–\$5,222/month	COL	Environmental Health U: 36, 44–46	
Forensic Scientists use their background in science to examine, identify, and classify physical evidence from criminal or suspected criminal activities.	WOIS-2616 DOT-029.261-026	Not surveyed \$2,370–\$4,250/month	COL	Criminology, Forensic Science, Criminal Justice	U: 42, 47–50 PU: 55, 60, 62
Industrial Engineers determine the most efficient and economical methods of using people, machines, and materials in an industrial setting.	WOIS-2424 DOT-012.167-030 OES-22128	Average 11% growth 2000–2008 97 openings/year \$2,600–\$5,090/month	COL, GRAD, LIC	Industrial Engineering	U: 36–51 PU: 53, 60

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Instrument Repairers inspect, install, and service delicate instruments and control systems used to measure and regulate machine operations.	WOIS-3186 DOT-710.281-026 OES-*	Declining 1% decline 2000–2008 29 openings/year \$1,220–\$6,590/month	OJT, HS, CC, TC, APP	Instrument Repair	CC: 13, 24 TC: 32 PU: 65 PCS: Training is available through apprenticeship programs.
Laboratory Testers furnish manufacturers with information to use for quality control, process control, product development, and environmental requirements.	WOIS-2693 DOT-029.261-010 OES-*	Average 11% growth 2000–2008 \$1,500–\$3,527/month 142 openings/year	OJT, CC, COL	Chemical Laboratory Technology/ Biotechnology	CC: 2, 5, 7, 18, 20 TC: 31
Mathematicians & Statisticians deal with the collection, analysis, interpretation, and presentation of numerical data. Most specialize in such areas as natural science, economics, and engineering.	WOIS-2332 DOT-020.067-014 DOT-020-167-026 DOT-020-067-022 OES-*	Average 3% growth 2000–2008 21 openings/year \$1,600–\$5,920/month	COL, GRAD	Mathematics & Statistics	U: 36–51 PU: 55–56, 59–67
Mechanical Engineers work with the design, production, testing, and installation of tools, machines, engines, and other mechanical equipment.	WOIS-2428 DOT-007.061-014 OES-*	Average 10% growth 2000–2008 251 openings/year \$2,700–\$4,500/month	COL, GRAD, LIC	Mechanical Engineering	U: 44–51 PU: 55, 60, 62, 65
Nuclear Engineers research, design, and assess nuclear energy systems and equipment.	WOIS-2429 DOT-015.061-014 OES-22117	Declining 9% decline 2000–2008 7 openings/year \$3,580–\$4,930	COL, GRAD, LIC	Engineering Physics, Materials Science & Engineering	U: 44–50 PU: 61
Physicists & Astronomers seek to increase understanding of natural laws governing forces, motion, matter, and energy. Astronomers and astrophysicists use physics and mathematics to understand space and the nature of the universe.	WOIS-2627 DOT-020.067-018 DOT-023.061-014 DOT-023.067-010 OES-24102	Slower than average 6% growth 2000–2008 7 openings/year \$3,340–\$6,710/month	COL, GRAD	Physics & Astronomy	U: 36–51 PU: 55, 59, 61–66
Pollution Control Technicians (also called Environmental Technicians) identify and find ways of controlling pollution in order to protect human health and the environment.	WOIS-2683 DOT-029.261-014	Not surveyed \$1,165–\$4,620/month	CC, TC, COL, APP	Environmental Control Technology	CC: 18, 20–23 TC: 33 U: 36

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Rubber & Chemical Processing Occupations prepare raw materials for use in the production of paints, fertilizers, explosives, plastic materials, and objects made of rubber stock.	WOIS-5918 OES-*	Declining 4% decline 2000–2008 26 openings/year \$1,260–\$4,060/month	OJT, HS	Plastics Technology	CC: 12
Surveyors determine the precise location and measurement of points, elevations, lines, and contours of the earth's surface to plan construction projects, make maps and charts, and locate property boundaries.	WOIS-2471 DOT-018.167-018 OES-22311	Slower than average 5% growth 2000–2008 28 openings/year \$1,800–\$4,390/month	COL, LIC	Civil Engineering	U: 44–50 PU: 55, 60, 62, 65

Transportation, Distribution & Logistics

Instructional programs and occupations dealing with planning and managing the movement of people, materials, and goods by road, pipeline, air, rail, and water; includes related professional and technical support services such as transportation planning and management, logistics services, and mobile equipment and facility maintenance.

- General Distribution
- Transportation
- Vehicle & Mobile Equipment Installation & Repairs

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Air Traffic Controllers regulate air traffic from airport control towers, air route control centers, and flight service stations located throughout the country. Their primary concern is the safe and efficient routing of air traffic.	WOIS-6126 DOT-193.162-018 OES-39002	Slower than average 5% growth 2000–2008 27 openings/year \$1,845–\$7,100/month	OJT, CC, COL, LIC	Air Traffic Control	CC: 10
Aircraft Assemblers join, assemble, and install tail, wing, fuselage, engines, and auxiliary parts in aircraft.	WOIS-5493 DOT-806.361.014 DOT-806.381-022 DOT-806.381-026 OES-93102	Declining 10% decline 2000–2008 101 openings/year \$1,730–\$3,290/month	OJT, HS, APP	Aircraft Mechanic, Aviation Maintenance	No approved/ accredited training programs in Washington.
Aircraft Mechanics service aircraft by locating problems and performing needed changes and repairs.	WOIS-3116 DOT-621.281-014 OES-*	Declining 2% decline 2000–2008 106 openings/year \$1,165–\$4,330/month	HS, CC, TC, APP, LIC	Aircraft Mechanics	CC: 2, 8, 23–24 TC: 33 PCS:
Automobile Mechanics inspect, maintain, and repair mechanical and electrical parts of automobiles, trucks, buses, and other gasoline-powered vehicles to keep them running properly.	WOIS-3112 DOT-620.261-010 OES-*	Average 18% growth 2000–2008 1,202 openings/year \$1,165–\$3,830/month	OJT, HS, VOC, CC, TC, APP	Automotive Technology	CC: 2, 5, 9–10, 12, 14, 20–24, 27–28, 30 TC: 31–35 PCS:
Body & Fender Repairers fix damaged fenders, bodies, and other automotive parts by straightening bent frames, removing dents, welding torn metal, and replacing parts too badly damaged to repair.	WOIS-5486 DOT-807.381-010 OES-85305	Average 18% growth 2000–2008 343 openings/year \$1,305–\$3,810/month	OJT, HS, CC, TC, APP	Auto Body Repair	CC: 6, 10, 14, 23–24, 27 TC: 31–35 PCS:

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Bus & Taxi Drivers operate busses and cars carrying passengers for a fee. Bus drivers may operate school or charter busses or common carriers within a local area. Taxi drivers pick up passengers in response to radio or telephone requests or drive around busy areas and watch for customers.	WOIS-6142 DOT-913.463-010 DOT-913.463-018 OES-*	Average 16% growth 2000–2008 626 openings/year \$1,165–\$3,380/month	OJT, VOC, CC, TC, LIC	Bus Driver Training	CC: 2, 21, 23, 27 TC: 31, 35 PCS:
Deck Hands do most of the manual labor on commercial ships, tug boats, ferries, and government vessels.	WOIS-6182 DOT-911.687-022 OES-*	Declining 1% decline 2000–2008 \$1,530–\$4,430/month	OJT, HS, VOC	Marine Maintenance & Repair	PCS:
Dispatchers supervise and coordinate activities of vehicles that transport freight or passengers according to schedule. Emergency Dispatchers operate radio telephone transmitting and receiving equipment to direct emergency mobile units such as police, highway patrol, firefighting, paramedic, ambulance, ranger, and tow truck units.	WOIS-6132 DOT-249.167-014 OES-*	Average 11% growth 2000–2008 152 openings/year \$1,165–\$3,603/month	OJT, TC, APP	Dispatcher, Emergency Dispatch	CC: 7, 16–17 TC: 35
Flight Attendants perform personal services such as serving food and drinks and by explaining emergency procedures so airline passengers can enjoy a safe and comfortable flight.	WOIS-7856 DOT-352.367-010 OES-68026	Faster than average 29% growth 2000–2008 269 openings/year \$1,165–\$4,746/month	HS, COL		No programs in Washington State. Training is available through major airlines.
Forklift Operators drive trucks or tractors with forklifts, elevating platforms, or trailer hitches that push, pull, lift, or stack materials in warehouses, storage yards or factories.	WOIS-6158 DOT-921.683-050 OES-97947	Average 9% growth 2000–2008 322 openings/year \$1,165–\$3,210/month	OJT, HS		No approved/ accredited training programs in Washington.
Freight Forwarding Specialists act as agents for businesses or individuals who want to ship goods by ocean, air, truck, or rail.	WOIS-1426 DOT-248.367-018	Not surveyed \$1,300–\$2,800/month	CC, TC	Transportation/ Logistics, Freight Forwarding	CC: 10–11, 13 TC: 35

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Freight Handlers load and unload baggage, freight, and all types of materials for shipment by rail, truck, or ship. They move items by hand or use equipment such as conveyors, hoists, hand and power trucks, and cranes.	WOIS-7112 DOT-929.687-030 DOT-911.663-014 OES-*	Average 11% growth 2000–2008 2,477 openings/year \$1,165–\$6,950/month	OJT, HS		No approved/ accredited training programs in Washington.
Local Truck Drivers drive trucks of all types and sizes to move products and materials from one place to another in a local area.	WOIS-6144 DOT-905.663-014 DOT-904.683-010 OES-*	Average 16% growth 2000–2008 \$1,280–\$2,690/month	OJT, CC, TC, LIC	Commercial Driving	CC: 2, 21, 23, 27 TC: 31, 35 PCS:
Long Haul Truck Drivers drive trucks over established long-distance routes to deliver products to homes and businesses.	WOIS-6145 DOT-904.383-010 OES-97102	Average 13% growth 2000–2008 1,156 openings/year \$1,165–\$3,240/month	OJT, VOC, CC, TC, LIC	Commercial Driver	CC: 2, 21, 23, 27 TC: 31, 35 PCS:
Meter Readers check electric power, gas, and water meters to record the use of residential and business customers.	WOIS-1639 DOT-209.567-010 OES-58014	Average 8% growth 2000–2008 29 openings/year \$1,455–\$3,212/month	OJT, HS		No approved/ accredited training programs in Washington.
Pilots & Flight Engineers fly airplanes to transport passengers and cargo. Pilots may perform other tasks such as crop dusting and inspecting power lines and may be employed by companies as corporate pilots.	WOIS-6188 DOT-196.263-014 OES-97702	Average 13% growth 2000–2008 89 openings/year \$1,300–\$16,000/month	VOC, CC, COL, TC, LIC	Aircraft Pilot	CC: 2, 10 TC: 33 U: 36 PU: 65 PCS:
Railroad Brake Operators operate and inspect railroad equipment on trains such as journal boxes, hand brakes, warning lights and signals, and couplers.	WOIS-6174 DOT-910.364-010 OES-*	Declining 19% decline 2000–2008 26 openings/year \$1,750–\$3,078/month	OJT, HS		No approved/ accredited training programs in Washington.
Railroad Laborers build, maintain, and repair railroad tracks and roadways for safe and effective operations.	WOIS-4288 DOT-859.683-018 DOT-910.684-014 OES-*	Declining 24% decline 2000–2008 1 opening/year \$1,400–\$8,310/month	OJT, HS		No approved/ accredited training programs in Washington.

Occupational Description	Codes	Employment Outlook in Washington & Approximate Pay	Suggested Education/ Training	Suggested Program of Study	Preparation & Training Sites in Washington
Refuse & Recycling Collectors collect trash, garbage, and recycled materials along an assigned route. They may drive garbage trucks or work on the loading crew.	WOIS-6164 DOT-955.687-022 OES-98705	Average 8% growth 2000–2008 81 openings/year \$1,610–\$3,030/month	OJT		No approved/ accredited training programs in Washington.
Ship Officers & Engineers work as a team to ensure the safe and efficient operation of powered vessels.	WOIS-6184 DOT-197.167-010 OES-*	Declining 1% decline 2000–2008 44 openings/year \$2,530–\$6,710/month	VOC, LIC		Several proprietary schools offer coursework in this field.
Shipping & Receiving Clerks receive incoming shipments of merchandise, prepare merchandise for shipment, and keep records concerning these transactions.	WOIS-7116 DOT-222.387-050 OES-*	Average 10% growth 2000–2008 578 openings/year \$1,165–\$2,674/month	OJT		
Truck & Heavy Equipment Mechanics rebuild, repair, and adjust both wheeled and tracked heavy equipment used in construction, logging, and industrial operations.	WOIS-3114 DOT-625.281-010 OES-*	Average 10% growth 2000–2008 342 openings/year \$1,560–\$3,970/month	OJT, HS, VOC, CC, TC, APP	Diesel Technology	CC: 4–6, 9, 12, 21, 23–24 TC: 31–32, 34 PCS:
Well Drillers set up and operate portable drilling machines and related equipment to drill wells.	WOIS-5947 DOT-859.362-010 OES-87902	Average 7% growth 2000–2008 18 openings/year \$1,120–\$3,470/month	OJT, HS, APP		Training is available through apprenticeship programs.